

UNCLASSIFIED

AD NUMBER

AD431011

NEW LIMITATION CHANGE

TO

**Approved for public release, distribution
unlimited**

FROM

**Distribution authorized to U.S. Gov't.
agencies and their contractors;
Administrative/Operational Use; Jan 1964.
Other requests shall be referred to
Central Intelligence Agency, Office of
Central Reference, 2430 E. Street, NW,
Washington, DC 20505.**

AUTHORITY

CIA ltr, 7 Sep 2004

THIS PAGE IS UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

431011

CATALOGED BY *JJC*
AS AD No. 431011

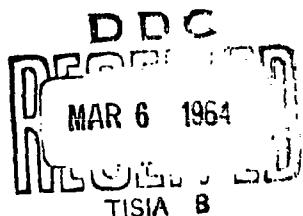


FOR OFFICIAL USE ONLY

CONSOLIDATED
TRANSLATION
SURVEY

Number 73

For January 1964



Prepared by

Foreign Documents Division
CENTRAL INTELLIGENCE AGENCY
2430 E St., N. W., Washington 25, D. C.

FOR OFFICIAL USE ONLY

NO OTS

CONSOLIDATED TRANSLATION SURVEY

FOR JANUARY 1964

TABLE OF CONTENTS

	<u>Page</u>
Notes concerning the survey	c
Requests for copies	d
USSR	
Economic	1
Political	16
Military	17
Geographic	18
Sociological	18
Biographic	19
Eastern Europe	
Economic	20
Political	24
Military	24
Geographic	25
Sociological	25
Western Europe	
Economic	27
Political	28
Military	30
Geographic	31
Sociological	31
Africa	
Economic	32
Political	32
Geographic	32
Middle East	
Economic	32
Political	33
Sociological	33
•	

	<u>Page</u>
Far East	
Economic	35
Political	38
Military	40
Geographic	41
Sociological	41
Latin America	
Economic	42
Political	43
Military	43
Sociological	43
North America	
Military	44
World Wide	
Political	44
Scientific	
Aerospace	45
Agriculture	46
Biological & Medical Sciences	49
Chemistry	67
Earth Sciences & Astronomy	70
Electronics	78
Engineering	81
Fuels and Propulsion	90
Materials & Metallurgy	90
Mathematics & Data Processing	107
Nuclear Science & Technology	112
Physics	126
Miscellaneous	130
Information on Cover-to-Cover Translations	135
Author Index	248

CONSOLIDATED TRANSLATION SURVEY

An author index to items in this issue is appended.

This survey is prepared monthly by Foreign Documents Division, CIA, from lists received through cooperation of US government agencies and includes translations of such agencies, private industry, universities, research institutions, and commercial translation organizations. It is a compilation of foreign documentary projects, completed or started during the month preceding this publication.

Translations are listed by area and subject category. Scientific projects are grouped as a section regardless of geographic area. Title in English, author, foreign language title of source of material, date and date of publication, and publication identification of the completed project are given when available.

Some of the above details may be unavailable on projects listed "in process." New projects in process will be listed only once, their subsequent listing being made when they are reported completed. Projects in process, i.e., not completed as of the date of this survey, are noted with an asterisk (*), and when available, a project-control or "in-process" number is noted in parentheses following the title.

REQUESTS FOR COPIES

Requests for copies of published projects should be made direct to the designated producing organization.

All requests for items prefixed by "CIA" should be addressed to Office of Central Reference, 2430 E Street, NW, Washington, D.C. 20505

Addresses of producers follow:

Academic Press

Academic Press Incorporated
111 Fifth Avenue
New York 3, New York

ACIC - Aeronautical Chart and Information Center (see OTS)

ACSI

Department of Army
Assistant Chief of Staff, Intelligence
Intelligence Documents Branch
Washington 25, D.C.

Requests from non-Government sources for
Army documents should be ordered through

Department of Commerce
Office of Technical Services
Washington 25, D.C.

ACSIL

Admiralty Center for Scientific Information and Liaison
Queen Anne's Mansions
St. James Park
London, SW 1, England

AEC - Atomic Energy Commission (see Department of Commerce)

AERE Harwell Lib

The Librarian
AERE, Ministry of Supply
Harwell, Didcot, Berks
England

AF

Department of Air Force
Collection and Dissemination
Assistant Chief of Staff, Intelligence
ATTN: AFCIN 1B3
Washington 25, D.C.

AGU

American Geophysical Union
1515 Massachusetts Avenue, NW
Washington 5, D.C.

AIBS

American Institute of Biological Sciences
2000 P Street, NW
Washington 6, D.C.

AID - Aerospace Information Division (see OTS)

AIP

American Institute of Physics
335 East 45th Street
New York 17, New York

Amer Math Soc

American Mathematical Society
190 Hope Street
Providence 6, Rhode Island

APL - Applied Physics Laboratory (see Navy)

Army Map Service - (see ACSI)

ATS

Associated Technical Services
PO Box 271
East Orange, New Jersey

BISI

British Iron and Steel Institute
4 Grosvenor Gardens
London, SW 1, England

BuShips - Bureau of Ships (see Navy)

CB

Consultants Bureau, Incorporated
227 West 17th Street
New York 11, New York

CTT

Columbia Technical Translations
5 Vermont Avenue
White Plains, New York

DDC

Defense Documentation Center
TISIA-1
Arlington Hall Station
Arlington 12, Virginia

Dept of Com

Department of Commerce
Office of Technical Services
Washington 25, D.C.

Dept of Interior

Department of Interior
Department Library
Foreign Documentation Section
Washington, D.C. 20240

Dept of State

Department of State
Division of Library and Reference Service
132 State Annex 1
Washington, D.C.

Dover Pub House

Dover Publishing House
1800 Varick Street
New York 14, New York

Emmanuel Coll Res Lang Ctr

Emmanuel College Research Language Center
The Fenway
Boston, Massachusetts

FTD - Foreign Technology Division (see AF)

HB

Henry Bratcher Technical Translation
PO Box 157
Altadena, California

Hill & Wang

Hill & Wang Incorporated
104 Fifth Avenue
New York 11, New York

HO - Hydrographics Office (see Navy)

ID - Intelligence Document (see ACSI)

ISA

Instrument Society of America
313 Sixth Avenue
Pittsburgh 22, Pennsylvania

JPRS

U.S. Department of Commerce
Office of Technical Services
Joint Publications Research Service
Building T-30
Ohio Drive & Independence Avenue, SW
Washington 25, D.C.

McGraw-Hill Book Co

McGraw-Hill Book Company, Incorporated
330 West 42d Street
New York 36, New York

NASA

National Aeronautics and Space Administration
1512 H Street, NW
Washington, D.C. 20546

Navy

Department of Navy
Office of Naval Intelligence
Washington 25, D.C.

NMS - Navy Medical School (see Navy)

NRC/C

National Research Council, Canada
The Library
Sussex Drive
Ottawa 2, Canada

NRL - Naval Research Laboratories (see Navy)

ONI - Office of Naval Intelligence (see Navy)

OT

Ministry of Aviation,
TIL.1 (a),
First Avenue House,
High Holborn,
London, W.C.1., England

OTS

Office of Technical Services
Department of Commerce
Washington 25, D.C.

(Also available through Department of Commerce
Field Offices)

Patent Office

Patent Office
Scientific Library
14th and Constitution Avenue, NW
Washington, D.C.

PS

Primary Sources
11 Bleecker Street
New York 12, New York

Scripta Technica, Inc.

Scripta Technica Incorporated
1000 Vermont Avenue, NW
Washington 5, D.C.

SIAM

Society for Industrial and Applied Mathematics
Box 7541
Philadelphia 1, Pennsylvania

Sigma Press

Sigma Press of Medical & Technical Summaries Incorporated
2140 K Street, NW
Washington, D.C.

SLA

SLA Translations Center
The John Crerar Library
86 East Randolph Street
Chicago 1, Illinois

TIL - Technical Information Library

Ministry of Aviation
TIL, 1(b)
Leysdown Road
Nottingham
London SE9, England

UCRL - (see AEC)

Univ of Oklahoma Press

University of Oklahoma Press
Norman
Oklahoma

USDA

Department of Agriculture
Foreign Agricultural Service
Room 5086
14th and Independence Avenue, NW
Washington 25, D.C.

319th MI Bn - 319th Military Intelligence Battalion
(see ACSI)

519th MI Bn - 519th Military Intelligence Battalion
(see ACSI)

525th MI Gp - 525th Military Intelligence Group
(see ACSI)

PROJECTS REPORTED
FOR JANUARY 1964

USSR

Economic

Conservation of Natural Resources and Establishment
of Reserves in the USSR, 108 pp.
RUSSIAN, bk, Moscow, 1960.

Dept of Interior
AC5 E57 No 22
PL-480

Lomako's Report on the USSR State Plan for 1964-1965,
by P. F. Lomako, 7 pp.
RUSSIAN, rpt, 16 Dec 1963.

JPRS 22502

Hydroelectric Power Plants and the Main Trends in
Their Development, by T. L. Zolotarev, Y. O. Shteyngauz,
8 pp.
RUSSIAN, bk, Energetika i Elektrifikatsiya SSSR v
Semiletke, po Mater'yalam XXI S'ezda KPSS, Chap XIV,
1960, pp 145-154. 9216502

OTS 63-11156
PL-480

The Planning and Construction of Populated Places
in the Northern Regions, by T. V. Rimskaya-Korsakova.
RUSSIAN, bk, Razmeshcheniye Zhilishchnogo Stroitel'stva
v Gorodakh, 1960, pp 131-148.

*ACSI I-3908
ID 2253818

The USSR State Budget for 1964-1965 by V. F. Garbuzov;
The Budget Commission of the Council of Nationalities,
by M. A. Yasnov, 6 pp.
RUSSIAN, rpt, The Soviet Economic System: Structure
and Policy, 16 Dec 1963.

JPRS 22502

Water Supply and Sewerage Reference Book, by
N. F. Fedorov, 15 pp.
RUSSIAN, bk, Spravochnik po Vodosnabzheniyu i
Kanalizatsii, 1960, pp 7-9; 11-13; 62; 63; 176; 177;
201; 205-207; 227; 228; 231; 232; 254; 255; 259; 319.

ACSI I-2995
ID 2240831

Modern Fork and Electric Lift Trucks, by I. Batishchov,
8 pp.
RUSSIAN, per, Avtomobil Transport, No 10, 1963,
pp 37-40.

JPRS 22742

Sulfuric Acid Production at Kiraz, by A. Kafarov,
Z. Yelizarov, et al, 6 pp.
RUSSIAN, np, Bakin Rabochiy, 16 Nov 1963, p 2.

JPRS 22675

Activities of the Kirovabad Aluminum Plant, by
G. Labutin, 5 pp.
RUSSIAN, np, Bakin Rabochiy, 23 Nov 1963, p 1.

JPRS 22676

USSR
Economic (Contd)

Instructions for Maintaining Work Record Books at Enterprises, Institutions, and Organizations, 12 pp.
RUSSIAN, per, Byulleten', No 9, 1963, pp 13-20.

JPRS 22459

Metal Saving in Machine-Building Plants of Moscow City Sovnarkhoz, by V. D. Razin, 8 pp.
RUSSIAN, per, Byul Tekh-Ekon Informatsii, No 11, 1963, pp 78-81.

JPRS 22503

The Experience of Enterprises of the Moscow Sovnarkhoz in Improving the Reliability and Lengthening the Service Life of Machine Tools, by I. V. Gellert, 9 pp.
RUSSIAN, per, Byul Tekh-Ekon Informatsii, No 11, 1963, pp 81-84.

JPRS 22503

Selected Articles From the Russian Newspaper Ekon Gazeta.

No 41, 12 Oct 1963, p 15.

JPRS 22459

Establishment of Work Norms for Servicing Production, by B. Mil'ner, 6 pp.

No 42, 19 Oct 1963.

JPRS 22455

Problems of Mineral Fertilizer Plant Design, by P. Kazakov, 5 pp, (pp 8,9).

Economic Problems of Basic Chemistry, 6 pp, (p 10).

JPRS 22455

Irresponsible Attitude by Designers Affects Chemical Industry Projects, by N. Lodygin, 5 pp, (p 11).

JPRS 22455

Public Catering Policies Reviewed, 7 pp, (pp 29, 30).

JPRS 22562

Promotion of Work Safety, by M. Cheptsova, 5 pp, (p 40).

JPRS 22459

No 43, 26 Oct 1963.

JPRS 22461

Plant Directors Must Further Implement Economy Measures, by A. Putrya, 5 pp, (p 5).

Plans for Highway and Construction Machinery, by Ye. Novoselov, 6 pp, (p 6).

JPRS 22549

Sulfuric Acid the Backbone of Chemistry, by A. Molchanov, 5 pp, (p 12).

JPRS 22671

USSR
Economic (Contd)

Selected Articles From the Russian Newspaper
Ekon Gazeta.(Contd)

No 43, 26 Oct 1963.
Twenty Million Tons of Fertilizers To Be Produced
in 1963, 5 pp, (p 14). JPRS 22671

A Progress Report on the Clothing Industry, 8 pp,
(pp 40, 41). JPRS 22562

No 44, 2 Nov 1963.
Industrial Development of the Ukrainian SSR, by
P. Shelest, 12 pp, (pp 7-9). JPRS 22461

Achievements of the Dnepropetrovsk Pipe Rolling
Plant, by P. Savkin, 5 pp, (p 12). JPRS 22695

No 45, 9 Nov 1963.
Activities of the Communist Party Organizations
in the Chemical Industry of Gor'kovskaya Oblast,
by V. Tikhomirov, 6 pp. JPRS 22710

The Activities and Status of the Council for
Economic Mutual Aid, by V. Shirmer, 6 pp. JPRS 22710

The Application of Economics at the Voskresensk
Chemical Combine, by A. Borokhovich, 6 pp. JPRS 22710

Automation in the Chemical Industry, by
M. Rakovskiy, 6 pp. JPRS 22710

Contributions of Agencies of Party State Control
to the Growth of the Large Scale Chemical Industry,
by V. Zaluzhnyy, 6 pp. JPRS 22710

Correspondence Economics Courses, by Kh. Markaryan,
8 pp. JPRS 22710

The Economical Nature of Chemical Fibers, by
I. Krichevskiy, 7 pp. JPRS 22710

The Experience of Several Plants in Reconstruction
Without Additional Capital Investments and Without
Halting Production, 5 pp. JPRS 22710

The Importance of Mineral Fertilizers to
Agriculture, by V. Martynovskiy, 5 pp. JPRS 22710

Main Directions of the Development of Chemical
Science and Technology, by D. Novikov, N. Alekhin,
7 pp. JPRS 22710

USSR
Economic (Contd)

Selected Articles From the Russian Newspaper
Ekon Gazeta, (Contd)

No 45, 9 Nov 1963.

Obstacles to the Introduction of the Attainments
of Chemical Science Into Industry, by M. Koton, 6 pp. JPRS 22710

The Potential and the Status of Polymeric Films
in Agriculture, by T. Pashchenko, I. Revut, 6 pp. JPRS 22710

Problems in Developing the Large Scale Chemical
Industry in Azerbaydzhhan, 5 pp. JPRS 22710

Problems in Developing a Suitable Raw Materials
Base for the Mineral Fertilizer Industry, by
A. Sidorenko, 5 pp. JPRS 22710

Problems in Supplying the Chemical Industry With
Machinery and Equipment, by L. Glikman, 5 pp. JPRS 22710

The Role and Status of the Chemical Industry as
a Supplier of Raw Materials to Light Industry, by
N. Tarasov, 5 pp. JPRS 22710

The Status of Chemical Machine Building in the
Ukraine, by F. Golovchenko, 6 pp. JPRS 22710

The Status of the Use of By-Product and Natural
Gas in the Chemical Industry, by M. Sidorenko, 5 pp. JPRS 22710

Synthetic Instead of Food Raw Material, by
I. Tovbin, G. Belan, 5 pp. JPRS 22710

The Types of Fertilizer Needed by Agriculture, by
P. Baranov, D. Koren'kov, 5 pp. JPRS 22710

Unsatisfactory Administration of Chemical Machine
Building Plants of the Volgo Vyatskiy Sovnarkhoz, by
K. Pogodin, N. Kozlov, et al, 6 pp. JPRS 22710

Soviet Bloc Chemical Industry, by V. Shirmir,
7 pp, (pp 18, 19). JPRS 22854

No 46, 16 Nov 1963, pp 30, 31.
Soviet Bloc Pricing Policies, by A. Alekseyev,
A. Belyayev, et al, 9 pp. JPRS 22854

No 47, 23 Nov 1963.
The Role of Party Organizations in Leningrad's
Chemical Equipment Plants, (p 4). JPRS 22543

USSR
Economic (Contd)

Selected Articles From the Russian Newspaper
Ekon Gazeta. (Contd)

No 47, 23 Nov 1963.
On Certain Problems of development of Machine-Tool
Building Plants, by V. Zaytsev, A. Musifulin, 5 pp,
(p 11). JPRS 22637

No 48, 30 Nov 1963.
Anti-Corrosion Problems in Machine-Building, by
Ya. Kolotyrkin, 6 pp, (p 5). JPRS 22503

Reject Prevention, by Ye. Shcheglov, 7 pp, (p 29). JPRS 22637

No 49, 7 Dec 1963.
Planning and the Chemical Industry, 7 pp, (p 2). JPRS 22679

The Processing of Polymers -- A New Branch of
Industry, 19 pp, (pp 3-5). JPRS 22679

Equipping the New Tula Oblast Chemical Industry,
by V. Suslyak, 6 pp, (p 6). JPRS 22679

Ashinskiy Metallurgical Plant Asha, by G. Menchinov,
5 pp, (p 33). JPRS 22553

No 50, 14 Dec 1963, p 10.
Specialization and Integration in Western Siberia,
by D. Bogorad, 6 pp. JPRS 22833

Power Construction and Output for 1963, 6 pp.
RUSSIAN, per, Energetik, No 11, 1963, pp 1-4. JPRS 22631

Chemical Machine-Building in Central Urals, by
V. Krotov, 5 pp.
RUSSIAN, np, Izvestiya, 20 Oct 1963, p 2. JPRS 22543

Lagging Production at the Bryansk Phosphorite
Plant, by V. Vasenkov, M. Garin, 5 pp.
RUSSIAN, np, Izvestiya, 22 Oct 1963, p 3. JPRS 22671

Future Expansion of the Chemical Industry of
Kazakhstan, 15 pp.
RUSSIAN, np, Kazakh Pravda, 11 Oct 1963, p 2. JPRS 22455

Lagging Construction of the Chimkent Phosphorus
Plant, by N. Maslov, 5 pp.
RUSSIAN, np, Kazakh Pravda, 22 Oct 1963, p 1. JPRS 22671

USSR
Economic (Contd)

Conference of Chemists of the By-Product Coke Oven Industry, 6 pp.
RUSSIAN, per, Koks i Khimiya, No 9, 1963, pp 3-5. JPRS 22458

Thirteenth Conference of Party Organization of Synthetic Rubber Plant imeni Kirov, by N. Pakov, 7 pp.
RUSSIAN, np, Kommunist, 22 Oct 1963, p 2. JPRS 22671

Specialization and Cooperation in Lithuanian Industrial Enterprises, by P. Gargasas, 8 pp.
RUSSIAN, per, Kommunist, No 11, Nov 1963, pp 26-31. JPRS 22636

Automation of the Chemical Industry, by M. Fedorovich, 9 pp.
RUSSIAN, per, Kommunist, No 16, Nov 1963, pp 79-84. JPRS 22679

Economics is the Key Field in the Struggle for Communism, 12 pp.
RUSSIAN, per, Kommunist, No 17, Nov 1963, pp 3-11. JPRS 22654

Increasing Output in the Ukrainian Chemical Industry, by P. Borisov, 8 pp.
RUSSIAN, per, Kommunist Ukrainsk, No 10, 1963, pp 26-31. JPRS 22636

The Development of Heavy Chemistry, 5 pp.
RUSSIAN, per, Kommunist Vooruzhennykh Sil, No 22, Nov 1963, pp 79-81. JPRS 22761

Preliminary Research in the Study of the Effects of Ionizing Rays on the Storage Life of Fresh Tangerines, by Koval'skaya, Silayeva, 9 pp.
RUSSIAN, per, Konservnaya i Ovoshchesushil Prom, No 9, 1963, pp 26-30. ACSI I-3784
ID 2253796

The Aktyubinsk and Alga Chemical Projects, by M. Prodan, I. Oparenko, et al, 6 pp.
RUSSIAN, np, Lenin Smena, 28 Nov, 1963, pp 1, 2. JPRS 22679

Shortage of Equipment for Mineral Fertilizer Construction Projects, by P. Denezhkin, Ye. Shlain, et al, 5 pp.
RUSSIAN, np, Lenin Znamya, 9 Oct 1963, p 1. JPRS 22458

Khrapun Tool Plant Masters Production of Six Types of Cutting Tools, by Ya. Kuznetsov, 5 pp.
RUSSIAN, np, Lenin Znamya, 16 Oct 1963, p 1. JPRS 22483

Experiences in the Mechanization of Forest Clearing Operations, by B. A. Vasil'yev, V. N. Fedorenko, 6 pp.
RUSSIAN, per, Lesnaya Prom, 1960, pp 5-7. ACSI I-1677
ID 2203211

USSR
Economic (Contd)

Equipment Utilization in Machine-Building Plants, by
V. Spirkin, 6 pp.
RUSSIAN, per, Mashinostroitel', No 10, 1963, pp 32, 33.

JPRS 22503

Complex Mechanization -- The Basis of Agricultural
Development, by N. N. Levykin, 14 pp.
RUSSIAN, per, Mehk i Elek Sotsialistich Sel'skogo Khoz
SSSR, No 5, 1963, pp 1-6.

JPRS 22738

Planned Type Size of Tractors and Its Analysis, by
V. N. Boltinskiy, 13 pp.
RUSSIAN, per, Mehk i Elek Sotsialistich Sel'skogo Khoz
SSSR, No 5, 1963, pp 7-12.

JPRS 22738

Machines for Combating Water and Wind Erosion, by
N. V. Gerasimov, 7 pp.
RUSSIAN, per, Mehk i Elek Sotsialistich Sel'skogo Khoz
SSSR, No 5, 1963, pp 13-15.

JPRS 22738

Proposals for Efficient Utilization of Rich Rivoy Rog
Iron Ores, by A. A. Kovshulya, 7 pp.
RUSSIAN, per, Metallurg i Gornorud Prom, No 5, 4 Nov 1963,
pp 42-45.

JPRS 22467

Decisive Conditions for Increased Agricultural Output,
by N. Mal'kov, 6 pp.
RUSSIAN, per, Molodoy Kommunist, No 11, 1963, pp 10-13.

JPRS 22582

Ways of Turning Internal Production Reserves of Ports
to Good Use, by O. Tomas, 5 pp.
RUSSIAN, per, Morskoy Flot, No 8, 1963, pp 12, 13.

JPRS 22476

Moscow Plants Use Computers in Production Control,
by Z. Larina, 5 pp.
RUSSIAN, np, Moskov Pravda, 12 Dec 1963, p 2.

JPRS 22850

Reconstruction of Chimkent Lead Plant, by A. Chicherov,
5 pp.
RUSSIAN, per, Narod Khoz Kazakh, No 9, 1963, pp 29-31.

JPRS 22676

Speed-Up In Uzbek of Heavy Chemical Development, by
G. Davydov, 6 pp.
RUSSIAN, per, Narod Khoz Uzbek, No 10, 1963, pp 19-22.

JPRS 22642

Economic Management on the Central Asiatic Railroad,
5 pp.
RUSSIAN, per, Narod Khoz Uzbek, No 11, 1963, pp 65, 66.

JPRS 22833

The Oil and Gas Industry of the USSR on the Eve of the
46th Anniversary of the October Revolution, by
P. P. Galonskiy, 7 pp.
RUSSIAN, per, Neft Khoz, Vol XLI, No 11, 1963, pp 1-5.

JPRS 22642

USSR
Economic (Contd)

Chemical Workers and the Struggle for Technical Progress, by I. Goloperov, 6 pp.
RUSSIAN, per, Partiynaya Zhizn, No 22, 22 Nov 1963,
pp 18-22.

JPRS 22761

Activities of the Novomoskovskiy Chemical Combine, by V. Fedinin, D. Nikitin, et al, 7 pp.
RUSSIAN, per, Partiynaya Zhizn, No 22, 22 Nov 1963,
pp 22-26.

JPRS 22761

Party-State Control at the Azovstal' Plant, by V. Kovalev, 5 pp.
RUSSIAN, per, Partiynaya Zhizn, No 22, 22 Nov 1963,
pp 40-43.

JPRS 22555

Certain Questions on the Development of Machine Building in Kazakhstan, by T. Ashimbayev, 10 pp.
RUSSIAN, per, Partiynaya Zhizn' Kazakh, No 8, 1963,
pp 61-67.

JPRS 22447

Selected Articles From the Russian Periodical Planovoye Khoz.

No 10, 1963.
A Better System of Awards in Socialist Competition, by L. Kovalev, 7 pp, (pp 15-19).

JPRS 22459

Improved Planning for Technical Progress, by A. Konson, 11 pp, (pp 20-26).

JPRS 22720

Fund for Utilization of Prices for New Equipment, by A. Gogoberidze, G. Ivanov, 11 pp, (pp 26-32).

JPRS 22720

No 11, 1963.
For Improved Planning of the National Economy, by Ya. Chadayev, 12 pp, (pp 1-9).

JPRS 22512

The Efficiency of Capital Investments in Nonferrous Metallurgy, by M. Golynskiy, 9 pp, (pp 21-27).

JPRS 22582

Computer Computations, by I. Zinger, N. Lapshin, 6 pp, (pp 28-31).

JPRS 22512

Preset Control as a Reserve in Increasing Output of Heavy Machine Tool Building, by I. Borisov, 8 pp. (pp 59-63).

JPRS 22636

USSR
Economic (Contd)

Selected Articles From the Russian Periodical
Pianovoye Khoz. (Contd)

No 11, 1963.
Novosibirsk Conference on Industrial Efficiency, 7 pp,
(pp 91-94). JPRS 22512

No 12, 1963, pp 1-11.
Soviet Bloc Economic Planning, by G. Sorokin,
14 pp. JPRS 22854

Problems of Expansion of the Chelyabinsk Metallurgical
Plant, by E. Fokon, 5 pp.
RUSSIAN, np, Pravda, 22 Oct 1963. JPRS 22695

Chemical Construction Projects Should Constitute a
Cash Front, by D. Filimonov, 6 pp.
RUSSIAN, np, Pravda, 23 Oct 1963, p 2. JPRS 22671

Chemistry and Economic Upsurge, 5 pp.
RUSSIAN, np, Pravda, 7 Jan 1964, p 1. JPRS 22698

The Search for Reserves at the Rubezhnoye
Chemical Combine, by I. Roldugin, 5 pp.
RUSSIAN, np, Pravda Ukrainsk, 27 Sep 1963. JPRS 22458

Lagging Construction of Cherkassy Nitrogen
Fertilizer Plant, by A. Khil'ko, 6 pp.
RUSSIAN, np, Pravda Ukrainsk, 4 Oct 1963, p 2. JPRS 22744

Quality of Chemical Production in Armenia Should
Be Improved, by Ya. Mikhaylovskiy, 5 pp.
RUSSIAN, per, Prom Armenii, No 9, 1963, pp 15-17. JPRS 22744

Urgent Problems in the Development of Steel-Casting
and Iron-Casting Production, by S. Gevorkyan, 7 pp.
RUSSIAN, per, Prom Armenii, No 10, 1963, pp 26-29. JPRS 22736

Expanding the Chemical Industry in the Ukraine, 5 pp.
RUSSIAN, np, Rabochaya Gazeta, 26 Oct 1963, p 1. JPRS 22744

The Kazakhstan Geological Service in the Fight for
Fulfilling the Seven-Year Plan, by Sh. Ye. Yesenov,
8 pp.
RUSSIAN, per, Razvedka i Okhrana Nedr, No 10, 1963,
pp 1-6. JPRS 22447

The Tasks of the Kirgiz Geologists, by K. D. Pomazkov,
8 pp.
RUSSIAN, per, Razvedka i Okhrana Nedr, No 10, 1963,
pp 6-11. JPRS 22447

The Problem of Eliminating the Lag in the Cargo Turnover
of River Transport, 8 pp.
RUSSIAN, per, Rechnoy Transport, No 9, 1963, pp 3-5. JPRS 22476

USSR
Economic (Contd)

Plans for Construction of Volga-Baltic Waterway, by
V. Korolev, 7 pp.
RUSSIAN, per, Rechnoy Transport, No 9, 1963, pp 38,39. JPRS 22476

Methods of Improving Navigational Conditions on the
Ob River, by N. Makkaveyev, R. Chalov, 6 pp.
RUSSIAN, per, Rechnoy Transport, No 9, 1963, pp 45-47. JPRS 22476

Constant-Flow Overhauling of Motors, 10 pp.
RUSSIAN, np, Sel'skaya Zhizn, 30 Nov 1963, p 3. JPRS 22639

New Cost Standards for Mass-Produced Clothing, by
N. L. Sotnikov, 8 pp.
RUSSIAN, per, Shveychnaya Prom, No 5, Sep, Oct 1963, pp 1-4. JPRS 22532

Article Production Needs the Engineer-Organizer
Discussed, 12 pp.
RUSSIAN, per, Sotsialisticheskiy Trud, No 10,
1963, pp 47-55. JPRS 22459

Pay Differentials Based on Working Conditions, by
R. Batkayev, 9 pp.
RUSSIAN, per, Sotsialisticheskiy Trud, No 10, 1963,
pp 65-70. JPRS 22459

Compensation for Work-Connected Injury, by
L. Lerer, M. Yelseyenkova, 15 pp.
RUSSIAN, per, Sotsialisticheskiy Trud, No 10, 1963,
pp 129-139. JPRS 22459

The Advantages of Silicon Calcite, by N. Lyubchenko, 5 pp.
RUSSIAN, np, Sovet Estoniya, 15 Sep 1963, p 2. JPRS 22449

Large-Scale Chemical Industry in Latvia, by
D. Dekhtyar, 5 pp.
RUSSIAN, np, Sovet Latviya, 20 Oct 1963, p 2. JPRS 22455

The Privilzhskiy Sovnarkhoz System of Product
Control and Its Application in Lithuania, by
I. Elentukh, 5 pp.
RUSSIAN, np, Sovet Litva, 15 Nov 1963. JPRS 22447

Developments in the Lithuanian Chemical Industry,
5 pp.
RUSSIAN, np, Sovet Litva, 7 Dec 1963, p 2. JPRS 22679

UFA Chemists are Using Reserves to Increase Output
of Fertilizers, by A. Krasnov, V. Khublarov, 5 pp.
RUSSIAN, np, Sovet Rossiya, 22 Oct 1963, p 1. JPRS 22671

USSR
Economic (Contd)

Chemical Research Institutions in Novoduybyshevsk,
by V. Sazonov, 5 pp.
RUSSIAN, np, Sovet Rossiya, 13 Nov 1963, p 2.

JPRS 22744

Improving the Planning of Ferrous Metallurgy, 8 pp.
RUSSIAN, per, Stal', 10 Oct 1963, pp 865-868.

JPRS 22467

Conference of Glass Industry Workers in Lisichansk, 8 pp.
RUSSIAN, per, Steklo i Keramika, No 9, 1963, pp 43-46.

JPRS 22449

Universal Vehicles for the National Economy, by
D. A. Rogovin, N. A. Sidorov.
RUSSIAN, per, Stroitel i Dorozhnyye Mashiny, No 9, 1963,
pp 1-5.

*ACSI I-3923
ID 2253824

The D-561 Loader, by A. D. Rogov, 6 pp.
RUSSIAN, per, Stroitel i Dorozhnyye Mashiny, No 10,
1963, pp 1-3.

JPRS 22757

Development of Asphalt Heaters for Pavement Repairs,
by L. I. Larionov, 5 pp.
RUSSIAN, per, Stroitel i Dorozhnyye Mashiny, No 11, 1963,
pp 25-28.

JPRS 22734

Improve the Design and Technology of Structural
Elements, by E. Ratts, 5 pp.
RUSSIAN, np, Stroitel Gazeta, No 116, 29 Sep 1963, p 3.

JPRS 22449

Greater Speed in Construction of the Volzhskiy Chemical
Combine Needed, by A. Kuznetsov, 5 pp.
RUSSIAN, np, Stroitel Gazeta, 30 Oct 1963, p 2.

JPRS 22744

Survey of Plan Fulfillment by the Building Materials
Industry, 6 pp.
RUSSIAN, per, Stroitel Materialy, No 9, 1963, pp 3, 4.

JPRS 22449

Selected Articles From the Russian Periodical
Sudostroyeniye.

No 9, 1963.
Activities of the Scientific and Technical
Society of the Ship-Building Industry, 11 pp,
(pp 73-75).

JPRS 22476

Visiting Session of the Boatbuilding Section
of the Scientific and Technical Society of the
Shipbuilding Industry, 6 pp, (pp 75, 76).

USSR
Economic (Contd)

Selected Articles From the Russian Periodical
Sudostroyeniye. (Contd)

No 10, 1963.

Activities of the Scientific and Technical Society
of the Shipbuilding Industry: Conference on Synthetic
Materials for Finishing and Fitting Out Shipboard
Compartments, 7 pp, (pp 78, 79).

JPRS 22572

Conference on Experience in the Operation of New
Ships in the Far Eastern Basin, by V. S. Antonenko,
5 pp, (p 80).

Twelfth Conference on the Structural Mechanics of the
Ship, Devoted to the Memory of P. F. Papkovich, 5 pp,
(pp 81, 82).

Liberalization of Amateur Car Building Rules Proposed, by
A. A. Lippart, et al, 11 pp.
RUSSIAN, per, Tekh Molodezhi, No 9, 1963, pp 12-15.

JPRS 22560

Ways of Improving Agricultural Production, by
A. Yezhevskiy, 6 pp.
RUSSIAN, per, Tekh v Sel'skom Khoz, No 9, 1963, pp 1-3.

JPRS 22510

Plans for Development of Agricultural Repair Bases,
by A. Selivanov, 8 pp.
RUSSIAN, per, Tekh v Sel'skom Khoz, No 9, 1963, pp 4-6.

JPRS 22510

Repair of the Machine Tractor Pool is a Most Important
National Economic Task, 7 pp.
RUSSIAN, per, Tekh v Sel'skom Khoz, No 10, 1963, pp 1-3.

JPRS 22468

Selected Articles From the Russian Periodical
Traktory i Sel'khozmashiny, No 11, 1963.

JPRS 22700

A Decade of Technical Progress in Agriculture, by
V. I. Lozovoy, 18 pp, (pp 1-3).

On the Economic Effectiveness of Tractor Utilization,
by F. I. Yalovenko, 20 pp, (pp 4-7).

Descriptions of New Soviet Cultivators, by
P. N. Proshunin, 7 pp, (pp 25-27).

New Agricultural Machines From the Plant imeni
Oktyabr'skaya Revolyutsiya, by G. G. Gogunskiy,
11 pp, (pp 29-31).

New Soviet Agricultural Equipment, by M. I. Gubarev,
S. D. Sheruda, et al, 7 pp, (pp 38, 39).

USSR
Economic (Contd)

Soviet Success in Automation of Labor, by V. Belkin,
5 pp.
RUSSIAN, np, Trud, 25 Oct 1963, p 2.

JPRS 22459

The UFA Chemical Plant Can Improve Production, by
O. Kuznetsov, A. Laletin, 5 pp.
RUSSIAN, np, Trud, 25 Oct 1963, p 2.

JPRS 22671

The Development of Industry, Transportation and
Communications in Turkmenistan, by B. Ovezov, 10 pp.
RUSSIAN, np, Turkmen Iskra, 27 Dec 1963, pp 2, 3.

JPRS 22833

A New System of Financing Capital Repairs in the
Sovkhozes, by S. P. Chernikov, 6 pp.
RUSSIAN, per, Uchet i Finansy v Kolkhozakh i Sovkhozakh,
No 10, 1963, pp 60-62.

JPRS 22639

A Leningrad Nonferrous Metals Plant, 11 pp.
RUSSIAN, np, Vecherniy Leningrad, 19 Oct 1963, p 2.

JPRS 22577

Advanced Growth Rate for Tool Production, by
G. A. Alekseyev, 7 pp.
RUSSIAN, per, Vest Mashinostroy, 11 Nov 1963, pp 3-6.

JPRS 22823

Comparisons of Soviet and American Industry and
Agriculture, by L. Tsyrlin, 20 pp.
RUSSIAN, per, Vest Statistiki, No 11, 1963, pp 25-39.

JPRS 22720

Industrial Expansion of a Vast and Rich Region: The
Urals, by L. Baulin, 6 pp.
RUSSIAN, per, Vneshnaya Torgovliya, No 10, 1963, pp 32-35.

JPRS 22461

Comparison of Socialist and Capitalist Economies, by
N. Ivanov, 9 pp.
RUSSIAN, per, Vneshnaya Torgovliya, No 11, 1963, pp 3-7.

JPRS 22854

Soviet Foreign Trade in 1962, by L. Cherepanova,
A. Smolyannikova, 21 pp.
RUSSIAN, per, Vneshnaya Torgovliya, No 11, 1963, pp 8-17.

JPRS 22854

Selected Articles From the Russian Periodical
Voprosy Ekon.

No 9, 1963, pp 86-95.
Technical Advance in Construction, by S. Kantorer,
15 pp.

JPRS 22449

No 10, 1963.
The Role of the Industrial Enterprise in the
Soviet Union, by E. Utkin, 13 pp, (pp 27-37).

JPRS 22642

USSR
Economic (Contd)

Selected Articles From the Russian Periodical
Voprosy Ekon. (Contd)

No 10, 1963.
Reducing Personnel Turnover in Enterprises, by
I. Kaplan, 13 pp, (pp 45-54). JPRS 22459

Labor Productivity on Kolkhozes and Sovkhozes, by
V. Khlebnikov, 12 pp, (pp 55-63). JPRS 22459

Rustavi Nitrogen Fertilizer Plant, by R. Beridze,
Ya. Gorelov, 6 pp.
RUSSIAN, np, Zarya Vostoka, 18 Dec 1963, pp 1, 2. JPRS 22860

Selected Articles From the Russian Periodical
Zheleznodorozhnyy Transport.

No 9, 1962, pp 87-89.
Improved Preparation Procedures for Grain-Carrying
Cars, by Z. M. Myasnikov, V. N. Korotkov. NRC/Ref: C-4343

No 5, 1963.
A. Concerning Some Important Though Unresolved
Problems of Electrification of Railways,
by L. I. Okhoshin, 6 pp, (pp 35-39). ACSI I-2994
ID 2240830

B. Intermediate Rail Fastenings and Improving
the Upper Road Structure, by D. G. Bradze, 6 pp,
(pp 45-49).

E. Carrying Capacity of Railway Cars in the
Future, by L. A. Shadur, V. V. Lukin, 5 pp,
(pp 57-61).

No 9, 1963, pp 61-64.
Railroad Transport in the First Half of 1963,
11 pp. JPRS 22476

Problems of Increasing Tractor Longevity at the
Minsk Tractor Plant, by Z. Rubanov, 5 pp.
BELORUSSIAN, np, Sovet Belorussiya, 22 Nov 1963, p 2. JPRS 22722

Industrial Construction in Mogilevskaya Oblast, by
A. Il'yushenko, M. Kapel'chik, 5 pp.
BELORUSSIAN, np, Sovet Belorussiya, 26 Dec 1963, p 2. JPRS 22860

Diesel Traction on USSR Railroads, by N. A. Fufranski,
5 pp.
GERMAN, per, Z Organisation fuer die Zusammenarbeit
der Eisenbahnen OSShD, No 5, 1962, pp 4-6. ACSI I-3638-A
ID 2251711

USSR
Economic (Contd)

New Railroad Technology in the USSR, by A. I. Seredin,
7 pp.

GERMAN, per, Z Organisation fuer die Zusammenarbeit
der Eisenbahnen OSShD, No 5, 1962, pp 12-17.

ACSI I-3638-B
ID 2251711

The Transportation of Oil in the USSR, 11 pp.
ITALIAN, per, Rivoluzione Industriale, No 127,
Jul 1963, pp 21-24. (Call No TPI R62, No 127, Eng Tr)

Army Map Service

Development of Electric Power and Electrotechnical
Industries of the USSR, by Aurel Avramescu,
Florin Tanasescu, 16 pp.
RUMANIAN, per, Electrotehnica, Vol X, No 11, 1962,
pp 401-408.

JPRS 22686

The Kiev Economic Administrative Region: Its
Specialized and Overall Development, by I. A. Kuhukalo,
128 pp.
UKRAINIAN, bk, Napryamy Spetsializatsiyi i Kompleksnogo
Rozvitiyu Kiyivskoho Ekonomichnogo Administrativnogo
Rayonu, Kiev, 1962, pp 27-89; 120-167; 178-189;
207-212; 263-289.

JPRS 22709

USSR
Political

The Marxist-Leninist Program of the Communist Movement, 17 pp.
RUSSIAN, per, Kommunist, No 17, Nov 1963, pp 12-24. JPRS 22654

Development of Democracy and Improvement of the State Apparatus, by M. Piskotin, 12 pp.
RUSSIAN, per, Kommunist, No 17, Nov 1963, pp 25-33. JPRS 22654

The Study of the History of the CPSU and the Formation of the Marxist-Leninist World Outlook, by S. Murashov, P. Smirnov, et al, 12 pp.
RUSSIAN, per, Kommunist, No 17, Nov 1963, pp 59-67. JPRS 22654

The CPSU as the Party of All the People in the Communist State, by L. Karapetyan, 5 pp.
RUSSIAN, np, Kommunist, 10 Nov 1963. JPRS 22262

Soviet Colonel Answers Chinese on War as a Continuation of Policy by Force, by P. Trifonenkov, 10 pp.
RUSSIAN, np, Krasnaya Zvezda, 30 Oct 1963, pp 2, 3. JPRS 22197

The New Party Program -- Creatively Adapting Marxist Theory to Changing Situations, by N. Lomakin, 5 pp.
RUSSIAN, np, Lenin Znamya, 17 Oct 1963. JPRS 22194

In the Unenviable Role of Defenders of the Personality Cult, by B. Leybzon, 12 pp.
RUSSIAN, per, Partinaya Zhizn', No 20, Oct 1963, pp 16-23. JPRS 22194

Communist Manifesto of the Present Epoch, by P. F. Fedoseyev, 9 pp.
RUSSIAN, np, Pravda, 31 Oct 1963, pp 2, 3. JPRS 22194

CEMA Chemical Industries Advances Exemplifying International Socialist Division of Labor, by V. Gavrilov, 5 pp.
RUSSIAN, np, Trud, 11 Oct 1963. JPRS 22194

Lenin and Stalin on the Road of the October Revolution, by Shih Tung-hsiang, 19 pp.
CHINESE, per, Hung-Ch'i, No 21, Nov 1963, pp 1-12. JPRS 22194

Sino-Soviet Schism's Place in History, by Branko Lazitch, 5 pp.
FRENCH, per, Est & Ouest, Vol XV, No 307, 16-31 Oct 1963, pp 1-3. JPRS 21965

USSR
Political (Contd)

The Twentieth Congress of the Communist Party of the Soviet Union, by Claudio Petruccioli, 16 pp. ITALIAN, per, Nuova Generazione, Vol VIII, No 39, 3 Nov 1963, pp 7-9.

JPRS 22440

On the Fulfillment of the 11 April 1963 Decree of the Central Committee of the CPSU and Council of Ministers USSR on Measures for Improving the Activity of the Academy of Sciences USSR and the Academies of the Union Republics, and the 28 May 1963 Decree of the Central Committee of the Communist Party of the Ukraine and the Council of Ministers Ukrainian SSR on Measures for Improving the Activity of the Academy of Sciences Ukrainian SSR Report of the President of the Academy of Sciences Ukrainian SSR, Academician V. Ye. Paton at the General Assembly of the Academy of Sciences Ukrainian SSR on 12 Jun 1963.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrayins'koyi SSR, No 7, 1963, pp 841-851.

JPRS 22181

Discussion of the Reports of V. Ye. Paton, Active Member of the Academy of Sciences USSR and G. S. Pisarenko, Corresponding Member of the Academy of Sciences, 6 pp.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrayins'koyi SSR, No 7, 1963, pp 973-975.

JPRS 22181

Military

Defense of the Population Under Conditions of Delivery of Atomic, Chemical and Bacteriological Weapons, by G. F. Baratov.
RUSSIAN, bk, 1963, 424 pp.

*FTD-TT-64-27

Antitank Obstacles, by M. P. Pribyl'skiy, 50 pp.
RUSSIAN, bk, Protivotankovyye Prepyatstviya, 1941, pp 1-79.

ACSI I-3313
ID 2246274

Military Strategy, a Comparison of the 1962 and 1963 Editions, by V. D. Sokolovskiy, 112 pp.
RUSSIAN, bk, Voyennaya Strategiya, Moscow, 1962, 1963.

JPRS 22451

Militant Positions Notes on Literary Criticism, by Yu. Barabash, 11 pp.
RUSSIAN, per, Kommunist, No 17, Nov 1963, pp 68-76.

JPRS 22654

USSR
Military (Contd)

On the Track of the Nuclear Blast Cloud,
by V. Medvedev, 9 pp.
RUSSIAN, per, Voyennyye Znaniya, No 7, 1963,
pp 32-34.

ACSI I-3921
ID 2253822

Military News, 18 pp.
ITALIAN, rpt, Notiziario Stati Esteri,
10 Jul 1963, pp 16, 17, 32, 38, 44, 45, 54-57,
65, 66, 73, 90-93, Encl No 1 to IR-2850079163,
OUSARMA, Italy.

ACSI I-3769
ID 2249270

Geographic

Attempt at Interpretation of the Regional Gravity
Map of the Georgian SSR, by M. A. Ayzenberg.
RUSSIAN, bk, Opyt Interpretatsii Regional'noy
Gravitatsionnoy Kartiny Gruzii.

ACIC

Comparison of Pre-Paleozoic Deposits of the
Western Slope of the Southern Urals and the
Ural-Tau Ridge, by A. I. Olli, V. A. Romanov.
RUSSIAN, bk, O Sopostavlenii Dopaleozoiskikh
Otlozheniy Zapadnogo Sklona Yuzhnogo Urala i
Khr. Ural-Tau.

ACIC

Compilation and Editing of General Maps, by
V. I. Sykhov, 364 pp.
RUSSIAN, bk, Sostavleniye i Redaktsirovaniye
Obshchegograficheskikh Kart, 1957, pp 1-279.

ACSI I-2678
ID 2235114

Microorganisms of Soils and Seas of the
Eastern Regions of the Soviet Arctic, by
A. Ye. Kriss, 13 pp.
RUSSIAN, per, Trudy Vtorogo Vsesoyuznogo S'ezda
Geograf Obshchego Soyuza SSR, Vol 1, 1948,
pp 359-367. 9689801

FTD-TT-63-925

Sociological

Psychology of Labor, by N. D. Levitov. (SF-2969)
RUSSIAN, bk, Psichologiya Truda, Moscow, 1963,
pp 1-340.

*JPRS

History of Aircraft Development, by
Viktor Fedorovich Bolkhovitinov.
RUSSIAN, bk, Puti Razvitiya Letatelnykh Apparsov,
1962, 129 pp.

*FTD-TT-63-1222

USSR
Sociological (Contd)

Here on the Very Frontier, by V. Nikitin, 5 pp.
RUSSIAN, np, Lenin Smena, 26 Sep 1963.

JPRS 22563

The Soviet Red Cross and the Public Health
Service of the USSR, by G. A. Mitrev, 7 pp.
RUSSIAN, per, Sovet Zdravookhraneniye, No 10, 1963,
pp 3-8.

JPRS 21991

Biographic

Sergey Andreyevich Molchanov, by D. N. Maksumov, 5 pp.
RUSSIAN, per, Medit Zhur Uzbek, No 5, 1963, pp 83-85.

JPRS 22494

Mikail Yul'yevich Bal'shin, by A. S. Fialkov, 5 pp.
RUSSIAN, per, Poroshkovaya Metallurgiya, No 4, 1963,
pp 3-5.

JPRS 22494

Petr Fokich Borovskiy and the Study of Cutaneous
Leishmaniasis, by S. I. Iskhakov, 5 pp.
RUSSIAN, per, Zdravookhraneniye Tadzhikistana,
No 3, 1963, pp 42-44.

JPRS 22494

EASTERN EUROPE

Economic

Sale of Housing by Peoples Councils, 5 pp.
BULGARIAN, np, Durzhven Vestnik, 24 Dec 1963, pp 1, 2. JPRS 22769

Selected Articles From the Bulgarian Periodical
Elektroenergiya, No 8, 1963.

Development of the Energoproekt Design Institute
for Electric Power Construction, by Dobri Mikhzylow,
7 pp, (pp 1-4). JPRS 22539

Basic Directions in the Development of the
Bulgarian Power System, by P. Katsarov,
Iv. Dyakov, et al, 13 pp, (pp 4-10). JPRS 22539

The Ivaylovgrad Hydroelectric Power Center, by
Spirodon Iliev, 15 pp, (pp 16-22). JPRS 22617

Development of Medium-Voltage Transmission Lines
in Bulgaria, by Dimitur Lalov, 9 pp, (pp 23-27). JPRS 22539

Some Problems in Financial Control, by Lyuben Stanev,
14 pp.
BULGARIAN, per, Schetovodstov i Kontrol, No 7, 1963,
pp 33-43. JPRS 22769

Amendment Clarification and Additional Regulations
on the Collection of Taxes and Fees, by Ivan Dimitrov,
6 pp.
BULGARIAN, per, Schetovodstov i Kontrol, No 7, 1963,
pp 47-51. JPRS 22769

Against Dogmatism for a Creative Development of
Economic Science, 32 pp.
CZECH, per, Hospodarske Noviny, Vol VII, No 45,
8 Nov 1963, pp 1, 6, 7; No 46, 15 Nov 1963, pp 6, 7. JPRS 22614

Goals and Principles of Socialist Rationalization
of the GDR'S Railroad System, by Werner Lindner,
11 pp.
GERMAN, per, Deutsche Eisenbahn Technik, Vol XI,
No 9, 1963, pp 385-387. JPRS 22834

The 1964 Plan of the East German Railroads, by
Werner Lindner, 7 pp.
GERMAN, np, Fahrt Frei, Vol XV, No 45, 5 Nov 1963, p 3. JPRS 22606

Reforms in the Training of Economists, by
Laszlo Kahulits, 7 pp.
HUNGARIAN, per, Figyelo, Vol VII, No 47, 20 Nov 1963,
p 3. JPRS 22745

Eastern Europe
Economic (Contd)

The Status of Hungarian Man Power 1961-1971, by
Laszlo Berettyan, Janos Timar, 24 pp.
HUNGARIAN, per, Kozgazdasagi Szemle, Vol X,
No 11, 1963, pp 1257-1270.

JPRS 22681

Problems of Monetary Theory Under Socialism, by
Lajos Acs, 18 pp.
HUNGARIAN, per, Kozgazdasagi Szemle, Vol X,
No 11, 1963, pp 1279-1291.

JPRS 22681

The Utilization of Regional Plans, by
Karoly Perczel, 27 pp.
HUNGARIAN, per, Magyar Epitoipar, Vol XII, No 8,
1963, pp 340-350.

JPRS 22541

The Development of Coal Mining in the Mecsek
Coal Basin, by Gyula Jager, 12 pp.
HUNGARIAN, per, Megyei es Varosi Statis Ertesito,
Vol XIII, No 10, 1963, pp 481-489.

JPRS 22834

Results of the Reorganization of Industrial
Management, by Geza Szili, 8 pp.
HUNGARIAN, per, Partelet, No 12, 1963, pp 12-17.

JPRS 22769

The Problem of Grain Production, 15 pp.
HUNGARIAN, per, Tarsadalmi Szemle, No 12, 1963,
pp 68-79.

JPRS 22630

Selected Economic Problems, by Michal Malicki, 14 pp.
POLISH, per, Gospodarka Planowa, No 11, 1963,
pp 17-22.

JPRS 22867

Balance of Fodder for the Farm Year 1963-1964, by
Franciszek Klocek, 6 pp.
POLISH, per, Nowe Rolnictwo, No 19, 1-15 Oct 1963,
pp 1, 2.

JPRS 22630

Vegetable Seed Situation, by Marcin Zaleski, 8 pp.
POLISH, per, Nowe Rolnictwo, No 19, 1-15 Oct 1963,
pp 38-40.

JPRS 22630

Achievements and Goals of the Chemical Industry,
by Zygmunt Szeliga, 18 pp.
POLISH, np, Polityka, No 42, 19 Oct 1963, pp 1, 4.

JPRS 22617

Perspective Transport Plan for the Years 1961-1980,
by Edward Malumowicz, 14 pp.
POLISH, per, Przeglad Komunikacyjny, No 11, 1963,
pp 387-393.

JPRS 22540

Eastern Europe
Economic (Contd)

1964 Tasks of Coal Mining Industry, by Jan Mitrega,
11 pp.
POLISH, per, Przeglad Techniczny, No 48, 1 Dec 1963,
pp 1, 3, 4.

JPRS 22745

The Complex Problem of Mutual Cooperation,
by Stanislaw Kuzinski, 8 pp.
POLISH, np, Zycie Gospodarsze, No 46, 17 Nov 1963,
pp 1, 3.

JPRS 22535

The Realization of CEMA Resolutions, 6 pp.
POLISH, np, Zycie Gospodarsze, No 46, 17 Nov 1963, p 3.

JPRS 22535

Milk Problems and Suggested Solutions How to
Overcome Stagnation, by Grzegorz Pisarski, 10 pp.
POLISH, np, Zycie Gospodarcze, No 50, 15 Dec 1963,
pp 3, 4.

JPRS 22810

The Present State of the So-Called District Heating
in the Rumanian People's Republic, Compared to
the World's Technical Level, by H. Furtunescu, 7 pp.
RUMANIAN, per, Energetica, Vol XI, No 7, 1963,
pp 296, 299, 300. (Call No Tk ES9, Vol 11, No 7,
Eng Tr)

Army Map Service

Railroad Transport at the Level of National Economic
Requirements, by Mihai Mihaita, 5 pp.
RUMANIAN, per, Lupta Caile Ferate Romine, Vol XX,
No 974, 28 Nov 1963, pp 1, 3.

JPRS 22834

Methods for Crude Oil Processing Used in Rumania,
by S. Tindeche, 5 pp.
RUMANIAN, per, Petrol si Gaze, Vol XIV, No 10,
1963, pp 500-502.

JPRS 22745

Increase in the Production of Superphosphates at
the Navodari Superphosphate and Sulphuric Acid
Works, by N. Popovici, 9 pp.
RUMANIAN, per, Revista de Chemie, Vol XIV, No 10,
1963, pp 559-564.

JPRS 22617

Continued Increase in the Export of Chemical
Products, by N. Murgu, 6 pp.
RUMANIAN, per, Revista de Chemie, Vol XIV,
No 10, 1963, pp 619, 620.

JPRS 22612

Cost Reduction in Railroad Operations, 5 pp.
RUMANIAN, per, Revista Cailor Ferate, Vol XI,
No 11, 1963, pp 613, 614.

JPRS 22750

Eastern Europe
Economic (Contd)

On the Correlation Between the Growth Rates of the Social Product and the National Income of Rumania, by G. Vrteli, 19 pp.
RUMANIAN, per, Revista de Statistica, Vol XII, No 8, 1963, pp 3-18.

JPRS 22453

Some Aspects of the Development of Rumanian Foreign Trade, by N. Suta, 16 pp.
RUMANIAN, per, Revista de Statistica, Vol XII, No 10, 1963, pp 46-57.

JPRS 22611

The 16 Februarie Arges Hydroelectric Power Plant, by Mircea Sipiceanu, 6 pp.
RUMANIAN, np, Scintea, Vol XXIII, No 6090, 28 Nov 1963, pp 1, 3.

JPRS 22539

The Need for Full Utilization of Transportation Capacities, by Dumitru Simulescu, 5 pp.
RUMANIAN, np, Scintea, Vol XXV, No 6087, 25 Nov 1963, pp 1, 3.

JPRS 22606

Present Trends in the Petroleum and Gas Industry, by Nicolae Ionescu, 5 pp.
RUMANIAN, per, Viiata Economica, Vol I, No 14, 22 Nov 1963, p 5.

JPRS 22539

Rational Utilization of Construction Materials, by A. Chirita, 5 pp.
RUMANIAN, per, Viiata Economica, Vol I, No 15, 29 Nov 1963, pp 1, 6.

JPRS 22834

The Druzhba Oil Pipeline and Prospects for the Development of Polish Chemistry, by A. Radlinskiy, 8 pp.
RUSSIAN, np, Ekon Gazeta, No 49, 7 Dec 1963, pp 35, 36.

JPRS 22843

CEMA - The Economic Integration of the Socialist Countries, by Draginja Arsic, 56 pp.
SERBIAN, per, Dokumenti Danasnjice, No 50, 11 Jul 1963, pp 3-64.

JPRS 22658

The Organization and Problems of the Yugoslav Highway Service, by Stjepan Lamer, 17 pp.
SERBOCROATIAN, per, Ceste i Mostovi, Vol XI, No 7-11, 1963, pp 4-42.

JPRS 22694

The Progress and Current State of the Highway System, by Miloje Popovic, 14 pp.
SERBOCROATIAN, per, Ceste i Mostovi, Vol XI, No 7-11, 1963, pp 71-76.

JPRS 22694

Eastern Europe
Economic (Contd)

A New Instruction on the Way to Determine Cadastral Income, 7 pp.
SERBOCROATIAN, per, Glas Poljopriv i Zadruz Organiz, Vol III, No 10, 1963, pp 56-60.

JPRS 22811

Land and Equipment on Large Farms in Serbia, by Stevan Silbiger, 12 pp.
SERBOCROATIAN, per, Poljoprivreda, Vol XI, No 7, 1963, pp 25-33.

JPRS 22605

Property Relations in the Village Under the New Constitution, by Radomir Djurovic, 11 pp.
SERBOCROATIAN, per, Poljoprivreda i Zadrugarstvo, Vol X, No 10, 1963, pp 3-10.

JPRS 22605

Motive Power in the General Agricultural Cooperatives, by Milan Petrovic, 9 pp.
SERBOCROATIAN, per, Poljoprivreda i Zadrugarstvo, Vol X, No 10, 1963, pp 42-48.

JPRS 22605

Political

The Party Accountability and Election Meetings -- A Central Intraparty Task, 6 pp.
BULGARIAN, np, Rabotnichesko Delo, 22 Nov 1963, p 2.

JPRS 22537

Planning and Spontaneity in Czechoslovak Internal Policy, by Robert F. Lamberg, 20 pp.
GERMAN, per, Osteuropa, No 11, 12, 1963, pp 755-767.

JPRS 22564

The Rudolf Slansky Case, by Harry Slapnicka, 6 pp.
GERMAN, per, Osteuropa, No 11, 12, 1963, pp 768-771.

JPRS 22564

The Lost Period -- Literary Developments in Czechoslovakia, by Rudolf Urban, 19 pp.
GERMAN, per, Osteuropa, No 11, 12, 1963, pp 772-784.

JPRS 22564

Military

National Defense and Army Welfare, by Dobri Dzhurov, 6 pp.
BULGARIAN, np, Narodna Armiya, 1 Dec 1963, pp 1, 2.

JPRS 22725

The Struggle for a High Level of Combat Readiness and to Educate Conscientious and Ideologically Convincing Soldiers, by Dobri Dzhurov, 11 pp.
BULGARIAN, np, Narodna Armiya, 14 Dec 1963, p 2.

JPRS 22712

Eastern Europe
Military (Contd)

Improvised Anti-Personnel and Anti-Tank Mines,
by Silvestar Bobrovic, 8 pp.
CROATIAN, per, Vojno-Tehnicki Glasnik, No 1, 1963,
pp 52-57.

ACSI I-3643
ID 2251716

Military Topography; a Textbook for Non-Commissioned
Officers. Second Revised Edition, 45 pp.
GERMAN, bk, Militartopographie; Lehrbuch fuer
Unteroffiziere, Berlin, 1958.

Dept of Interior
100bm 459m

Problems of Super Merchant Ships, by F. W. Bruns,
8 pp.
GERMAN, per, Truppenpraxis, No 11, 1962, pp 889-902.

Navy Tr 3661
ONI 967

Geographic

On Moldavitos From Bohemia and Moravia, by
F. Hennus, 114 pp.
CZECH, per, Rozpravy II Trida, Ceske Akademie
Matematicko-Prirodnicku Ved, Vol XXXVII, No 24,
1928. 9217132

NASA TT F-111

On the Application of Terrain Models and of the Map
Relief, by H. Muehle.
GERMAN, bk, Ueber die Anwendung von Gelaendemodellen
und Kartenreliefs.

ACIC

Guidebook of Excursions in the Vicinity of Warsaw:
the Warsaw Basin, 47 pp.
POLISH, rpt, International Association for
Quaternary Research of the Sixth Congress, Warsaw,
1961.

Dept of Interior
201 In44gew
PL-480

Sociological

Conference on Psychology in Bulgarian, by
St. Stamboliev, 6 pp.
BULGARIAN, per, Spisanie na Bulgarskata Akademie na Naukite,
Vol VIII, No 1, 1963, pp 104-108.

JPRS 22566

Automation and Life, by A. N. Kolmogorov, 13 pp.
BULGARIAN, per, Fiziko-Matematichesko Spisanie,
Vol V, No 3, 1962, pp 198-204. 9689798

FTD-TT-63-765

Eastern Europe
Sociological (Contd)

The Administrative Division of the Rumanian People's Republic, by Walter Roubitschek, 10 pp.
GERMAN, per, Petermanns Geographische Mitteilungen, Vol CVII, No 1, 1963, pp 45-48. (Call No G1 P47, Vol 107, No 1, Eng Tr)

Army Map Service

Rumanian Treatise on Experimental Psychology, by E. Fischbein, N. Radu, 19 pp.
RUMANIAN, per, Revista de Psihologie, Vol IX, No 2, Apr-Jun 1963, pp 317-323.

JPRS 22430

Disability Compensation as a Special Form of Protection Under the Law on Disability Insurance, by Milan Radonjic, 5 pp.
SERBIAN, per, Socijalna i Zdravstvena Politika, Vol XV, No 7, 8, 1963, pp 22-25.

JPRS 22533

WESTERN EUROPE

Economic

Copenhagen's Gas and Electric Service, 11 pp.
DANISH, rpt, Kobenhavens Kommunalkalender, 1961,
pp 245-257.

ACSI I-3542-A
ID 2250284

Copenhagen's Water Supply, 5 pp.
DANISH, rpt, Kobenhavens Kommunalkalender, 1961,
pp 262-266.

ACSI I-3542-B
ID 2250284

Selected Articles From The Dutch Periodical
Nederlands Tijdschrift voor Natuurkunde.

*AERE-Harwell

Vol XXVI, 1960.

The Construction of Powerful Electromagnets, I,
by D. de Klerk, (pp 1-15).

The Construction of Powerful Electromagnets, II,
by D. de Klerk, (pp 65-82).

The Construction of Powerful Electromagnets, III,
by D. de Klerk, (pp 345-364).

Vol XXVII, 1961, pp 353-374.

The Construction of Powerful Electromagnets, IV,
by D. de Klerk.

Building and Improvement of Roads and Traffic
Communications in the Turku District, by M. Jaaskelainen,
12 pp.
FINNISH, per, Tielehti, Vol XXXIII, No 3, 1963, pp 35-40.
(Call No TE 4 S95, Vol 33, No 3, Bng Tr)

Army Map Service

Dangers of Electric Fishing: Precautions to Take,
by R. Cuinat.

FRENCH, per, Bulletin Francaise de Pisciculture, No 204,
1961, pp 125-131.

Dept of Interior
SH211 E82 No 428

The Effect of Sunshine on the Temperature of Vehicle
Body Metal Sheet Assuming European and Tropical
Conditions, by Josef Pfleger.

GERMAN, per, Automobiltechnische Zeitschrift, Vol LXIII,
Apr 1961, pp 105-108.

*ACSI I-3946
ID 2204000464
S25th MI Gp

Swiss Electric - Power Supply Within the Framework of
the West European Electric-Power Industry, by
R. Hochreutiner, 18 pp.

GERMAN, per, Bulletin des Schweizerischen
Elektrotechnischen Vereins, No 12, 1963, pp 483-494.

ACSI I-3630
ID 2250326

Western Europe
Economic (Contd)

Vienna's Sewerage System, by Leopold Schwarz,
8 pp.

GERMAN, per, Der Stadte Tag, Vol XVI, No 8,
1963, pp 414-416. (Call No J541 S77, Vol 16, No 8, Eng Tr) Army Map Service

Street Cleaning and Garbage Collection in
Finland, by Heikki Saarento, 12 pp.

GERMAN, per, Der Stadte Tag, Vol XVI, No 8, 1963,
pp 420-424. (Call No J541 S77, Vol 16, No 8, Eng Tr) Army Map Service

The Norderfield Electric Power Association, 12 pp.

NORWEGIAN, per, Elektroteknisk Tidsskrift, No 5,
15 May 1963, pp 217-221. (Eng Tr) Army Map Service

Political

Interview of Finnish President Urho Kekkonen in
Danish Newspaper, 6 pp.

DANISH, np, Politiken, 15 Sep 1963, Encl No 1 to
Desp A-132, AmEmbassy, Helsinki. Dept of State

SWP Organ Calls for More Effective Organization and
Action, 5 pp.

DUTCH, per, De Brug, No 7, 23 Nov 1963, pp 4, 5. JPRS 22482

Dutch Leftist Unity Discussed, 5 pp.

DUTCH, per, De Brug, No 7, 23 Nov 1963, pp 5, 6. JPRS 22482

Theory as a Condition for Renewal of the French
Communist Party, by Jean Dru, 10 pp.

FRENCH, per, Le Debat Communiste, No 20, 15 Oct 1963,
pp 10-14. JPRS 22100

The French Communist Students Conflict With the
French Communist Party, by Jean-Pierre Morillon, 11 pp.
FRENCH, per, Est & Quest, Vol XV, No 308, 1-15 Nov 1963,
pp 6-10. JPRS 22194

Lazitch Disagrees With United States Interpretation
That the Dispute is Ideological, by Branko Lazitch, 5 pp.
FRENCH, per, Est & Quest, Vol XV, No 309, 16-30 Nov 1963,
pp 1-3. JPRS 22482

Extreme Leftist Weekly Sees Both Sides in Error, 6 pp.
FRENCH, np, La Gauche, No 42, 1 Nov 1963, pp 4, 5. JPRS 22067

Waldeck Rochet's 6 October Report to the Central Committee --
a FCP Foreign Policy Statement, by Waldeck Rochet, 27 pp.

FRENCH, np, l'Humanite, No 5945, 8 Oct 1963, PP 7, 8. JPRS 22044

Western Europe
Political (Contd)

Joint Communique Issued by French and Netherlands
Communist Parties, 7 pp.
FRENCH, np, l'Humanite, 30 Oct 1963, p 3.

JPRS 22194

On the Last Meeting of the Central Committee of the PCF,
25 pp.
FRENCH, per, Unir, Nov 1963, pp 2-4.

JPRS 22194

The Peaceful Road to Socialism, 20 pp.
FRENCH, per, Unir, Nov 1963, pp 8-10.

JPRS 22194

Unir Calls for End of Polemic, Says Everyone Is
Wrong, 22 pp.
FRENCH, per, Unir pour le Socialisme, No 130, Sep 1963,
pp 4, 5; No 131, Oct 1963, pp 2-5.

JPRS 22067

Air Transport Agreement Between the Austrian Federal
Government and the Government of the State of Israel, 7 pp.
GERMAN, rpt, Encl No 4 to Desp A-370, AmEmbassy, Vienna, Dept of State

Agreement Between the Austrian Federal Government
and the Government of the Republic of France
Concerning Air Transport, 8 pp.
GERMAN, rpt, Abkommen Zwischen der Oesterreichischen
Bundesregierung und der Regierung der Republik
Frankreich Ueber den Luftverkehr, Encl No 2 to Desp
A-370, AmEmbassy, Vienna.

Dept of State

Urbany's Report to the Luxembourg Communist Party
Central Committee, 17 November 1963, by D. Urbany, 9 pp.
GERMAN, np, Zitung vum Letzeburger Vollek, 28 Nov 1963,
pp 2, 4.

JPRS 22482

Law No 4322: Amending, Supplementing and Abolishing
Provisions of the Legislation on the Election of
Deputies, 7 pp.
GREEK, per, Official Gazette, Vol CXL, 11 Sep 1963,
Encl to Desp A-464, AmEmbassy, Athens.

Dept of State

Nenni's Reply to Longo, by Nenni, 5 pp.
ITALIAN, np, Avanti, 29 Oct 1963, pp 1, 9.

JPRS 22194

Socialists and Communists, by Lucio Libertini, 10 pp.
ITALIAN, np, Mondo Nuovo, 27 Oct 1963, pp 6, 7.

JPRS 22194

Selected Articles From the Italian Periodical
Nuova Generazione.

Vol VIII, No 38, 27 Oct 1963, p 8.
Excerpt From Ochetto's Report to the FGCI
Council, 5 pp.

JPRS 22194

Western Europe
Political (Contd)

Selected Articles From the Italian Periodical
Nuova Generazione (Contd)

Vol VIII, No 59, 3 Nov 1963
For a New Unity in the International Communist
Movement, by Achille Occhetto, 16 pp, (pp 3-6).

JPRS 22440

Peaceful Coexistence, by Roberto Romani, 12 pp,
(pp 18-20).

The Colonial Revolution, by Michele Figurelli,
Franco Petrona, 12 pp, (pp 28-30).

The Class Struggle in Capitalist Countries, by
Lanfranco Turci, 11 pp, (pp 39-41).

Italian Communists Praise Performance of Indonesian
Communist Party, by Giuliano Pajetta, 14 pp.
ITALIAN, per, Rinascita, 8 Jun 1963, pp 14, 15.

JPRS 22592

The Socialist Current in the CGIL, by Giorgio Benvenuto,
Fidia Sassano, 11 pp.
ITALIAN, per, Tempi Moderni, No 14, Jul-Sep 1963,
pp 145-156.

JPRS 22223

The Socialist Trade Union Current in the Industrial
Triangle, by Fidia Sassano, 6 pp.
ITALIAN, per, Tempi Moderni, No 14, Jul-Sep 1963,
pp 157-170.

JPRS 22223

Longo's Speech to the Italian Socialist Party
Congress, by Luigi Longo, 8 pp.
ITALIAN, np, l'Unita, 27 Oct 1963, pp 1, 14.

JPRS 22194

Sven Landin Suggests Renewal Through Renunciation
of Moscow Declaratich, Cooperation With SPP, by
Sven Landin, 8 pp.
SWEDISH, np, Ny Dag, 9 Nov 1963, pp 2, 5.

JPRS 22100

Military

Projectiles for Infantry or Artillery Material, by
Andre Losfeld, Maurice Roustant, 9 pp.
FRENCH, Patent No 1,147,642.

Patent Office

New German Rules of the Air, 25 pp.
GERMAN, rpt, Enc1 No 1 to Desp A-785. AmEmbassy, Bonn.

Dept of State

Western Europe
Military (Contd)

The Armored Infantry Company, Armored Personnel Carrier.
GERMAN, manual, Die Panzergrenadierkompanie, Bonn,
HDV 232/1, Aug 1963, pp 1-169.

*ACSI I-4174
ID 2204004464

The Armored Infantry Platoon, Armored Personnel
Carrier.
GERMAN, manual, Der Panzergrenadierzug, Bonn, HDV 233/1,
22 Aug 1963, pp 7-212.

*ACSI I-4175
ID 2204004564

The Combat Tanks of the 30-Ton Category, 8 pp.
GERMAN, per, Soldat und Technik, Vol VI, No 7,
1963, pp 372-376. (Call No U3 S68, Vol 6, No 7, Eng Tr) Army Map Service

Will There Be a Europa Transport Helicopter, 7 pp.
GERMAN, per, Wehr und Wirtschaft, No 11, 1962, pp 514-516.

ACSI I-3899
ID 2253811

Tactical Training by Data Machine, by Dag Stenberg, 8 pp.
SWEDISH, per, Sveriges Flotta, No 9, 1963, pp 116-
Encl No 1 to USNA, Stockholm, Oct 1963.

Navy 5892040363

Geographic

The Scheldt, Access to the Port of Antwerp, by G. Willems,
5 pp.
FRENCH, np, Lloyd Anversois, 24 Sep 1963, Encl to
OUSARMA, Belgium.

ID 2807033663

Territorial Claims in the Polar Regions, by
H. Larzilliere, 7 pp.
FRENCH, per, La Revue Maritime, No 196, Feb 1963,
pp 216-227.

Navy Tr 3659
ONI 969

Sociological

The Ras Shamra Discoveries and the Old Testament,
by Arvid S. Kapelrud.
NORWEGIAN, bk, 91 pp.

Univ of Okla Press

Accidents From Falls of Roof and Coal in Bituminous-
Coal Mines.
SPANISH, rpt, Miner's Circular, No 48, 1957.

Dept of Interior
TN23 U5 No 48(a)

AFRICA

Economic

Investment Code of the Republic of Chad, 17 pp.
FRENCH, rpt, Encl No 2 to Desp A-70, AmEmbassy,
Fort Lamy.

Dept of State

Nigeria's Electric Power Supply, by E. Eskilsson, 8 pp.
SWEDISH, per, Elektricitetens Rationella Anvandning,
1963, pp 100-102. (Eng Tr).

Army Map Service

Political

The Maghreb Between Myth and Reality, by Farhat Dachraoui,
6 pp.
FRENCH, np, l'Action, 21, 22 Nov 1963, pp 1, 4.

JPRS 22565

Laws and Decrees of Senegal Governing Trade
Agreements 86 pp.
FRENCH, per, Journal Official de la Republique du
Senegal, Vol CVIII, No 3615, 13 Jul 1963, np 945-961;
972-980.

JPRS 22166

Black Africa in Crisis, by Philippe Docraene, 5 pp.
FRENCH, np, Le Monde, 30, 31 Oct 1963, Encl to Desp
A-1124, AmEmbassy, Paris.

Dept of State

Geographic

Description of Spanish Sahara, by Musafir, 5 pp.
SPANISH, per, Sahara, Vol I, No 23, 17 Nov 1963,
p 9; 24 Nov 1963, p 8.

JPRS 22565

MIDDLE EAST

Economic

On the Road We Travel, by Aharon Yadlin, 11 pp.
HEBREW, np, Davar, 7 Oct 1963, pp 5, 9.

JPRS 22548

Some Problems of the Cooperative Movement in a
Changing World, by Moshe A. Gilbo'a, 7 pp.
HEBREW, np, Davar, 11 Nov 1963, pp 5, 6.

JPRS 22849

Middle East
Economic (Contd)

Our Aim: A Cooperative Movement, Socially and Economically Sound, Levered and Geared for Expansion, by Zeev Onn, 9 pp.
HEBREW, np, Davar, 11 Nov 1963, pp 8, 9.

JPRS 22849

Tsitor--Flourishing Enterprise for Electrical Equipment, 5 pp.
HEBREW, np, Haarets, 13 Nov 1963, p 9.

JPRS 22548

Political

Presidential Decree-Law of No 72 of 1963 Concerning Nationalization of Certain Companies and Concerns, 9 pp.
ARABIC, per, Official Journal of the United Arabic Republic, No 177, 8 Aug 1963, Encl to Desp A-232, AmEmbassy, Cairo.

Dept of State

Sociological

Cooperatives Could Double Membership and Rid Themselves of Social and Public Stigma, by Z. Onn, 7 pp.
HEBREW, np, Davar, 11 Nov 1963, p 5.

JPRS 22849

We Must Revolutionize Our Outlook and Activities, by Y. Ritov, 8 pp.
HEBREW, np, Davar, 11 Nov 1963, pp 5, 6.

JPRS 22849

We Shall Find the Way to Remove the Odious Stigma From the Fine Cooperative Accomplishments, by Aharon Becker, 6 pp.
HEBREW, np, Davar, 11 Nov 1963, p 7.

JPRS 22849

Tel-Aviv Municipal Hospitals, by Yair Qotler, 5 pp.
HEBREW, np, Haarets, 11 Nov 1963, p 4.

JPRS 22548

Atomic Power Plants, by Ami Dor, 6 pp.
HEBREW, np, Haarets, 4 Dec 1963, p 12.

JPRS 22638

In the Israeli Academic World, 9 pp.
HEBREW, per, Mada, Oct 1963, pp 116-121.

JPRS 22516

Middle East
Sociological (Contd)

A Study of Plural Societies in Sikkim, Lepcha,
Bhutia and Nepalee - Nakane Chie, 116 pp.
JAPANESE, rpt, 1958, pp 17-64.

ACSI I-3710
ID 2251743
319th MI Bn

People of South Asia; India, Pakistan, Nepal,
Sikkim, Ceylon and the Maldives Islands, by
Guseva, D'yakov, 15 pp.

RUSSIAN, bk, Narody Yuzhnay Azii: Indiya,
Pakistan, Nepal, Sikkim, Butan, Tseylon, i
Mal'divskiye Ostrova, Moscow, 1963, pp 507-515.

ACSI I-3712
ID 2251744
319th MI Bn

FAR EAST

Economic

Research on Sand Control, 201 pp.
CHINESE, rpt, A Report on the Coordinated Research on the Desert Regions, No 5, 1963, pp 1-108.

JPRS 22569

The Problem of a Comprehensive Balance in Finance, Credit and Material Resources, by Ko Chih-ta, 27 pp.
CHINESE, per, Ching-chi Yen-chiu, No 10, 1963, pp 1-12.

JPRS 22557

An Evaluation of the Economic Benefits From Growing Cotton in the Drought Areas of Wu-Kung Hsien, by Wu Yung-hsiang, 18 pp.
CHINESE, per, Ching-chi Yen-chiu, No 10, 1963, pp 27-36.

JPRS 22557

The Significance of Random Sampling Techniques in Socio-Economic Statistics, by Tsou I-jen, Ma Chia-shan, 9 pp.
CHINESE, per, Ching-chi Yen-chiu, No 10, 1963, pp 37-43.

JPRS 22557

Special Characteristics and Requirements of Electrical Equipment in Chemical Fiber Plants, by Liu Chen-chung, 11 pp.
CHINESE, per, Fang-chih Chi-shu, No 7, 27 Jul 1963, pp 30-32.

JPRS 22619

A Small Experimental Yarn Starching Machine, by Ts'ui Tsung-pao, 15 pp.
CHINESE, per, Fang-chih Chi-shu, No 8, 27 Aug 1963, pp 15-18.

JPRS 22619

Chinese Assistance in the Construction of the Thai-Nguyen Iron and Steel Combine, 5 pp.
CHINESE, per, Yueh-nan Chieh-shao, No 2, 10 May 1963, pp 5, 6.

JPRS 22621

Water Economy Problems in China, by Janusz Grotulski, Maria Daszkiewicz-Kuthan, et al, 7 pp.
GERMAN, per, Gospodarka Wodna, Vol XXIII, No 7, 1963.

JPRS 22402

Travel in Communist China, by Ami Shamir, 8 pp.
HEBREW, np, Lamerhav, 11 Nov 1963, pp 4, 8.

JPRS 22558

New GOI Telecommunications Ordinance, 8 pp.
INDONESIAN, rpt, 15 Jun 1963, Encl No 1 to Desp A-362, AmEmbassy, Djakarta.

Dept of State

Far East
Economic (Contd)

With a Strong Peasant Unity Front Wipe Out Malaysia
and Economic Difficulties, 6 pp.
INDONESIAN, np, Marian Rakjat, 25 Nov 1963, p 1.

JPRS 22528

Onward, Bravely Wipe Out Malaysia and Overcome
Economic Difficulties, by Asmu, 10 pp.
INDONESIAN, np, Marian Rakjat, 25 Nov 1963, p 2.

JPRS 22528

Rationalization of Distribution Cable Plan,
by Yokoyama Ichio, 9 pp.
JAPANESE, per, Shisetsu, Vol XII, No 6, 15 Jun 1963,
pp 19-22. (Call No TK4 555, Vol 12, No 6, Eng Tr)

Army Map Service

Industrial Development in North Korea, by Choe, 11 pp.
KOREAN, per, Kyongje Chisik, No 9, 1963, pp 13-18.

JPRS 22427

Agricultural Development in North Korea, 1945-1962,
by Ko Sang-hup, 7 pp.
KOREAN, per, Kyongje Chisik, No 9, 1963, pp 18-22.

JPRS 22427

A Survey of Living Conditions in North Korea
1949-1962, by Hwang Byong-ok, 5 pp.
KOREAN, per, Kyongje Chisik, No 9, 1963,
pp 22-25.

JPRS 22427

The Growth of National Income and the Improvement
of Living Conditions in North Korea, by Chong Byong-sik,
Yi Jin-yong, 13 pp.
KOREAN, per, Kyongje Yongu, No 3, Sep 1963, pp 16-27.

JPRS 22764

Functions and Role of the Financial Inspection
Committees in Factories and Enterprises, by
Choe Chang Hak, 5 pp.
KOREAN, np, Minju Choson, Vol CCLXV, 8 Nov 1963, p 2.

JPRS 22575

Our Party's Basic Line in Economics and Heavy
Industry Which Serves Light Industry and Agriculture,
by Cho Chaeson 8 pp.
KOREAN, np, Minju Choson, Vol CCLXIX, 13 Nov 1963,
pp 2, 3.

JPRS 22575

Party Spirit Must Be Expressed in Practical Activities,
by Hyon Chol-kyu, 7 pp.
KOREAN, per, Nodong Simmun, 12 Nov 1963, pp 2, 3.

JPRS 22575

A Need for Better Protection of Livestock During
the Winter Months, by D. Nyamsanjaa, 8 pp.
MONGOLIAN, per, Namyn Am'dral, No 9, 1963, pp 30-33.

JPRS 22534

The Construction Work Concerns the Entire People,
5 pp.
MONGOLIAN, per, Namyn Am'dral, No 10, 1963, p 3-5.

JPRS 22859

Far East
Economic (Contd)

Idealists are Distorting the Latest Discoveries of the Materialist Biological Science, by D. Eregdendagba, 5 pp.

MONGOLIAN, per, Namyn Am'dral, No 10, 1963, pp 74-78.

JPRS 22859

The Need to Implement Labor Organization and the New Wage System at Agricultural Artels, by N. Jagbaral, 18 pp.

MONGOLIAN, np, Unen, 13 Nov 1963, pp 2-4.

JPRS 22859

Workers of Public Safety Organs Welcome New Statutes and Oath, 14 pp.

MONGOLIAN, np, Unen, 17 Nov 1963, pp 1, 2.

JPRS 22534

New Regulations Governing Manufacture and Sale of Nuoc Mam, 8 pp.

VIETNAMESE, rpt, Encl to Desp A-305, AmEmbassy, Saigon.

Dept of State

Selected Articles From the Vietnamese Periodical Hoc Tap, No 11, 1963.

JPRS 22550

Careful Cultivation Aimed At Increasing Farm Productivity in the North, by Nguyen Van Loc, 7 pp, (pp 31-35).

Let Us Properly Understand the Work of Fixing Labor Limits in Factories and Workshops, by Pham Dinh Tan, 10 pp, (pp 36-42).

Relationship Between Developing Production and Organizing the People's Armed Forces, by Tran Duc, 5 pp, (pp 43-47).

The Carrying Out of the System of Socialist Factory Management at Haiphong, by Ngo Thuc, 13 pp, (pp 54-57).

Selected Articles From the Vietnamese Newspaper Nhan Dan.

1 Nov 1963, p 3.
Government Employees Charge Tea and Cigarettes to the State, by Tran Quang, 6 pp.

JPRS 22691

3 Nov 1963, p 3.
Collection of Winter Season Agricultural Taxes, by Nguyen Van Ngu, 5 pp.

JPRS 22691

Far East
Economic (Contd)

Selected Articles From the Vietnamese Newspaper
Nhan Dan. (Contd)

4 Nov 1963, p 2. JPRS 22691
Water Conservation for Agriculture,
by Ha Ke Tan, 11 pp.

5 Nov 1963, p 2. JPRS 22691
Drought Prevention in North Vietnam, by
Huu Tho, 6 pp.

25 Nov 1963, p 3. JPRS 22761
Product Quality at Tran Hung Dao Machinery
Plant, by Tran Dung Tien, 5 pp.

Political

Where Would the Chinese Leaders' Theses Take Us,
by Roger Garaudy, 10 pp.
FRENCH, per, Cahiers du Communisme, No 10,
1963, pp 3-11. JPRS 21965

Two Letters to the Amicale Organ on the Chinese
Position, 5 pp.
FRENCH, per, Le Debat Communiste, No 19,
15 Sep 1963, pp 11-14. JPRS 22067

Conflict of Generations and Classes in the Communist
International, by Branko Lazitch, 5 pp.
FRENCH, per, Est & Quest, Vol XV, No 308,
1-15 Nov 1963, pp 1-3. JPRS 22194

Selected Articles From the Indonesian
Newspaper Marian Rakjat.

14 Nov 1963, pp 1, 3. JPRS 22545
Aidit's Speech at the Ground Breaking Ceremony
of the People's Cultural Palace and the PKI
Building, 8 pp.

15 Nov 1963, p 3. JPRS 22545
Communists With the Spirit of the
12 November 1963 Meeting Can Overcome All
Obstacles.

Far East
Political (Contd)

Selected Articles From the Indonesian
Newspaper Harian Rakjat. (Contd)

26 Dec 1963, p 3.
Arouse the Buffalo Spirit. Ever Onwards,
No Retreat!. JPRS 22853

28 Dec 1963.
The Revolutionary Tradition of the People of
North Borneo, by Trikoyo, 5 pp, (p 2). JPRS 22853

Carry Out the Four-Year Plan With a Spirit
of Patriotism and High Proletarian Internationalism,
by M. H. Lukman, 8 pp, (p 3).
Notes on the Task of the Party in the Cooperative
Movement, by Zaelani, 5 pp, (p 3). JPRS 22853

30 Dec 1963, p 3.
The Role of Scholars in the Struggle for
National Independence, 6 pp. JPRS 22853

The Meaning of the October Revolution to the
Indonesian Revolution, by Njoto, 10 pp.
INDONESIAN, np, HR Minggu, 3 Nov 1963, pp 1, 2. JPRS 22528

China-USSR: Under the Burden of Intolerance, 30 pp.
ITALIAN, np, Il Filo Rosso, Sep 1963, pp 3-17. JPRS 22194

How Does the Japanese Communist Party Think of
the So-Called International Ideological Conflict?
JAPANESE, np, Akahata, No 10, 1963, p 4. JPRS 22194

Japanese Communists Criticize Revisionists, Say
CCP and CPSU Should End Dispute, 7 pp.
JAPANESE, np, Akahata, 10 Nov 1963, p 2. JPRS 22197

Rising to New Heights in Socialist Construction, 9 pp.
KOREAN, per, Kulloja, No 18, 20 Sep 1963, pp 17-24. JPRS 22740

The Battle Tasks for the Execution of the 1964
Plan, by Yim Ke-ch'ol, 16 pp.
KOREAN, per, Kulloja, No 18, 20 Sep 1963, pp 25-34. JPRS 22740

North Korean Communists Call for Unity of
Socialist Camp and Independence of Individual
Parties; Blame Revisionists for Split, 33 pp.
KOREAN, np, Nodong Sinmun, 28 Oct 1963. JPRS 22197

A Need for Better Leadership of Primary Party
Organizations, by N. Dagha, 11 pp.
MONGOLIAN, per, Namyn Am'dral, No 9, 1963, pp 11-15. JPRS 22534

Far East
Political (Contd)

Work of Party Organizations at Public Services Establishments Must Be Drastically Improved, by R. Badmaarag, A. Myadagmaa, 11 pp. MONGOLIAN, per, Namyn Am'dral, No 9, 1963, pp 20-25. JPRS 22534

Mongolian Party Organ Defends the CPSU, 40 pp. MONGOLIAN, per, Namyn Am'dral, No 10, 1963, pp 33-51. JPRS 22197

Party Secretary Vieira on the Attitude of the Chinese Communist Party and the Unity of the Communist Movement, by Gilberto Vieira, 38 pp. SPANISH, per, Documentos Politicos, No 33, Jul, Aug 1963, pp 1-24. JPRS 22009

Analysis and Criticism of the Chinese Line, by Santos Barvena Azura, 5 pp. SPANISH, per, Politica, Vol IV, No 84, 15 Oct 1963, pp 28A-29. JPRS 22067

A Defense of Tito, by Antonio Rodriguez, 5 pp. SPANISH, per, Siempre, No 539, 23 Oct 1963, pp 26, 27, 70. JPRS 22067

Ideological Questions on Two Great Revolutionary Movements, by Pham Van, 9 pp. VIETNAMESE, per, Hoc Tap, No 11, 1963, pp 11-16. JPRS 22550

Deviationish Thinking Causes Setbacks to Cooperative Movement in Lang-son, by Be Chan Hung, 10 pp. VIETNAMESE, per, Hoc Tap, No 11, 1963, pp 48-50. JPRS 22550

Seeking to Understand the Cadre is a Permanent Responsibility of Party Committees on all Levels, by Phan Quan, 13 pp. VIETNAMESE, per, Hoc Tap, No 11, 1963, pp 51-54. JPRS 22550

Military

The New Taibopuroro Hijinesa Machine - The MU-2 in All Models. JAPANESE, per, Airreview, No 5, 1963, pp 25-31. *ACSI I-3957 ID 2204000864 319th MI Bn

Far East
Geographic

Ground Water of Manchuria, by Soki Yamamoto.
JAPANESE, rpt.

Dept of Interior
209(900) qUn34pr
No 714

Summary, Note on Palaeo-Tokyo Bay, by
Yabe Hisakatsu.
JAPANESE, per, Natural Science and Museums,
Vol XVIII, No 5, 6, 1951.

Dept of Interior
209(900) qUn33pr
No 396

An Account of a Trip to the South Seas, by
Shozo Nishida.
JAPANESE, per, Sapporo National History
Society, Vol VI, Part I, 1915, pp 80-84.

Dept of Interior
209(900) qUn33pr
No 349

Sociological

Overseas Chinese Now at Home Exhorted to Keep
Up Good Work, by Fang Fang, 7 pp.
CHINESE, per, Chiao-wu Pao, No 5, Oct 1963, pp 2-5.

JPRS 22563

Customs and Feudalistic Superstition, by
Yi Chang, 5 pp.
CHINESE, per, Chiao-wu Pao, No 5, Oct 1963,
pp 40, 41.

JPRS 22563

General Features of the Li Language, by
Ou-yang Chuch-ya, Cheng Yi-ch'ing, 36 pp.
CHINESE, per, Chung-kuo Yu-wen, No 5, Oct 1963,
pp 432-441.

JPRS 22616

Popularization of the Vernacular in Shanghai
Municipality, by Yu Heng, 8 pp.
CHINESE, per, Wentzu Kai-ko, No 9, 1963,
pp 2-4.

JPRS 22583

Saluting the Victory of Socialism With Optimism:
A Report on the Tour of Five Socialist Countries,
by Sudisman, 12 pp.
INDONESIAN, np, Marian Rakjat, 29 Oct 1963, p 3.

JPRS 22528

Impressions Gained During a Visit to the Peoples
Republic of China, by Singgih Praptodihardjo, 5 pp.
INDONESIAN, np, Marian Rakjat, 31 Oct 1963, p 3.

JPRS 22528

The September 1958 Plenum Intensified the Higher
Tempo of Socialist Construction, by Yi Hyok-su, 9 pp.
KOREAN, per, Kulloja, No 18, 20 Sep 1963, pp 41-46.

JPRS 22740

Far East
Sociological (Contd)

The New School Year of Party Education, 9 pp.
MONGOLIAN, per, Namyn Am'dral, No 9, 1963,
pp 3-6.

JPRS 22534

Results of the 1962-1963 School Year in Party
Education and Its Future Tasks, 8 pp.
MONCOLIAN, per, Namyn Am'dral, No 9, 1963, pp 7-10.

JPRS 22534

The Youth is a Great Force, by Ch. Purebjab, 9 pp.
MONGOLIAN, per, Namyn Am'dral, No 9, 1963,
pp 16-19.

JPRS 22534

LATIN AMERICA

Economic

Bank of Mexico Revisions of Mexican Gross National
Product Data for Years 1950 -- 1962, 9 pp.
SPANISH, rpt, Encl to Desp A-431, AmEmbassy, Mexcio City. Dept of State

Comibol's Final Presentation to the Miners
Conferation, 7 pp.
SPANISH, document, Encl No 1 to Desp A-249,
AmEmbassy, La Paz.

Dept of State

Reconstruction of Camaguey After the Hurricane,
by Rafael Sanchez Lalebret, 9 pp.
SPANISH, per, Bohemia, No 46, 15 Nov 1963, pp 4-9.

JPRS 22410

National Sugar Worker Leader Urges Greater
Production at Less Cost, 6 pp.
SPANISH, per, Bohemia, No 46, 15 Nov 1963,
pp 16, 17.

JPRS 22410

1964 Harvest to Be Effected With Cutting Brigades
and Mechanical Cane Loading, 6 pp.
SPANISH, per, Bohemia, No 46, 15 Nov 1963,
pp 64-66.

JPRS 22410

Pinar Del Rio Discusses Measures for Giving Impetus
to the Harvest, 6 pp.
SPANISH, np, Hoy, 14 Dec 1963, p 6.

JPRS 22821

Latin America
Political

Castro Visit to USSR in April-May 1963 Analyzed, by
Robert K. Furtak, 6 pp.
GERMAN, per, Osyeuropa, No 11, 12, 1963, pp 818-821.

JPRS 22482

Translation of President Chiari's State of Nation
Speech Before National Assembly, 1 October 1963,
23 pp.
SPANISH, rpt, Encl No 1 to Desp A-129, 10 Oct 1963,
AmEmbassy, Panama.

Dept of State

Message by His Excellency the President of the
Nation Doctor Arturo U. Illia, 13 pp.
SPANISH, rpt, 12 Oct 1963, Encl No 1 to Desp
A-399, AmEmbassy, Buenos Aires.

Dept of State

Declaration of the Central Executive Committee of
the Communist Party of Colombia, Bogota, 2 August 1963,
5 pp.
SPANISH, per, Documentos Politicos, No 33, Jul, Aug 1963,
pp 95-97.

JPRS 22009

Paraguayan Communists Back CPSU, Deny Existence of
Chinese Faction, 15 pp.
SPANISH, np, El Popular, 2, 3, 5, 7, 8, 9, 11 Oct 1963.

JPRS 22009

Chilean Communists Chide Chinese for Nationalist
Deviations, 10 pp.
SPANISH, per, Principios, No 97, Sep, Oct 1963,
pp 13-16.

JPRS 22009

Military

Uniform and Equipment Regulations for National
Police Officers, 15 pp.
SPANISH, bk, Reglamento de Uniformes y Equipo
Para Oficiales de Carabineros, No 16, 1957,
pp 1-20, Encl No 1 to R-157-62 ARMA, Chile.

ACSI I-2434
ID 2222378

Sociological

Columinist's Reply to Alfredo Guevara, 8 pp.
SPANISH, np, Hoy, 19-21 Dec 1963.

JPRS 22821

NORTH AMERICA

Military

The Helicopter as a Weapons Carrier, by Carl G. Henze,

9 pp.

GERMAN, per, Wehr und Wirtschaft, No 11, 1962, pp 510-513. ACSI I-3900

ID 2253812

WORLD WIDE

Political

Fourth International Answers Izvestia, by Pierre Frank,

6 pp.

FRENCH, per, l'International, No 15, Oct 1963, pp 4, 5.

JPRS 21965

SCIENTIFIC

Aerospace

The Turbojet Engine and Turbojet With Afterburner as a Unit in Automatic Aircraft Control Systems, by V. I. Novikov, 24 pp.

RUSSIAN, bk, Avtomlicheskoye Regulirovaniye Aviadvigateley, Moscow, No 3, 1961. 9690462

FTD-TT-63-746

Experimental Determination of the Dynamic Properties of Turbojet Engines as Units in an Automatic Flight-Control System, by V. I. Novikov, 7 pp.

RUSSIAN, bk, Avtomlicheskoye Regulirovaniye Aviadvigateley, Moscow, No 3, 1961. 9690462

FTD-TT-63-746

Measuring the Doses of Radiation Received by Yu. A. Gagarin, G. S. Titov at the Time for First Space Flights, by I. B. Keirim-Markus, Ye. Ye. Kovalev, 5 pp.

RUSSIAN, bk, Iskusstvennyye Sputniki Zemli, No 15, 1963, pp 102,103. 9689833

FTD-TT-63-1017

Pilot and Aircraft, by V. G. Denisov, R. N. Lopatin, 261 pp.

RUSSIAN, bk, Letchik i Samolet, 1962, pp 1-203. 9690503-V

FTD-TT-63-276

The Design of Aircraft, by N. A. Fomin, 447 pp.

RUSSIAN, bk, Proyektirovaniye Samoletov, Opredeleniye Vesa. Komponovka Vybor Skhemy i Osnovnykh Parametrov, 1961, pp 1-362. 9690584-V

FTD-TT-62-913

Together With the Komsomol, by G. Shatunov, 99 pp.

RUSSIAN, bk, Vmeste s Komsomolom, 1961,

ACSI I-3741
ID 2251750

The Antonov An-12 Cub and An-10 Ukraina or Cat, 5 pp.

FLEMISH, per, Lucht-en Ruimtevaart, No 5, 1963, 3 pp.

ACSI I-3587
ID 2250307

Liquid Fuel Rocket Engines for Aircraft, by Paul Douessin, 7 pp.

FRENCH, per, Forces Aerennes Francaises, No 193, Jun 1963, pp 883-896.

Navy Tr 3660
ONI 970

Airports and Supersonic Transport, by J. M. Willis.

GERMAN, per, Flugwelt, Vol XV, No 11, 1963, pp 932-938.

ACIC

Scientific
Aerospace (Contd)

Astronautics, by Mieczyslaw Subotwicz, 207 pp.
POLISH, bk, Astronautyka, 1960, pp 20-36; 95-161;
192-203; 379-396; 460-463; 474-486. 9690492-V

FTD-TT-61-123

New Weapon X - Ball Shaped Thunders, Globular
Fireballs, by Jerzy R. Konieczny, 7 pp.
POLISH, per, Wojskowy Przeglad Lotniczy, No 2,
1963, pp 72-75. 9689653

FTD-TT-63-806

Agriculture

Selected Articles From the Russian Newspaper
Ekon Gazeta.

No 38, 21 Sep 1963, pp 5-10. JPRS 22573
Efficient Distribution and Specialization in Farm
Production, 12 pp.

No 40, 5 Oct 1963. JPRS 22573
Kolkhoz Production Management, 20 pp, (pp 3-12).

Sovkhoz Production Management, 8 pp, (pp 12-14).

No 42, 19 Oct 1963, pp 2-12. JPRS 22514
Improvements in Agriculture, 27 pp.

No 46, 16 Nov 1963, p 17. JPRS 22866
The Role of Aviation in Agriculture, by V. Nazarov,
6 pp.

Important Changes in the Grain Production in the USSR,
by A. Romanchenko, 18 pp. JPRS 22514
RUSSIAN, per, Ekon Sel'skogo Khoz, No 9, 1963, pp 27-39.

Production of Leguminous Crops in the Ukraine, by
L. Addryenko, 11 pp. JPRS 22514
RUSSIAN, per, Ekon Sel'skogo Khoz, No 9, 1963,
pp 69-76.

How to Better Utilize Agricultural Capital Investments
in Belorussia, by V. Tarasevich, Ya. Blyankman, 10 pp.
RUSSIAN, per, Ekon Sel'skogo Khoz, No 10, 1963, pp 64-70. JPRS 22480

Irrigation in the USSR After the September 1953 Plenum
of the CPSU Central Committee, 6 pp.
RUSSIAN, per, Gidrotekh i Meliorats, No 10, 1963, pp 3-6. JPRS 22514

Scientific
Agriculture (Contd)

Harvest in West Kazakhstan, 5 pp.
RUSSIAN, np, Kazakh Pravda, 3 Sep 1963, p 2. JPRS 22573

Grasses and Legumes in the Tadzhik Republic, by
A. Maksumov, 8 pp.
RUSSIAN, np, Kommunist Tadzhikistana, 20 Aug 1963, p 2. JPRS 22573

Factors Influencing the Keeping Period and Quality of
Fresh Fruits, Berries, and Vegetables Treated With
Gamma Rays, by L. P. Koval'skaya, 7 pp.
RUSSIAN, per, Konservnaya i Ovoshchesushil Prom, No 10,
1963, pp 22-26. ACSI I-3904
ID 2253814

Facts and Figures on Agriculture, 12 pp.
RUSSIAN, per, Partiynaya Zhizn, No 18, Sep 1963,
pp 35-40. JPRS 22573

Improved Planning of Agricultural Production Costs, by
M. Ratgauz, 10 pp.
RUSSIAN, per, Planovoye Khoz, No 10, 1963, pp 61-65. JPRS 22514

Amortization Funds on Kolkhozes, by Ya. Kagner, 11 pp.
RUSSIAN, per, Planovoye Khoz, No 11, 1963, pp 42-48. JPRS 22480

Material Incentives for Production Plans, by N. Popov,
9 pp.
RUSSIAN, per, Planovoye Khoz, No 11, 1963, pp 48-53. JPRS 22480

Ukraine Agricultural Plan Fulfillment, by P. Ye. Shelest,
14 pp.
RUSSIAN, np, Pravda Ukrayny, 29 Aug 1963, pp 1, 2. JPRS 22573

Farming in the Lithuanian SSR, by M. Shumauskas, 10 pp.
RUSSIAN, np, Sovet Litva, 7 Sep 1963, pp 1, 3. JPRS 22573

Hybridization of Secale Cereale SSP. Segetale Rozhev.
With Cultivated Varieties, by V. G. Tikhomirov.
RUSSIAN, per, Trudy po Prikladnoy Botanike Genetike i
Selektsii, Vol XXXII, No 2, 1960, pp 259-270. *USDA

Breeding Corn for Higher Protein Content, by
A. B. Kovarskiy, B. P. Pukalov.
RUSSIAN, per, Vest Sel'skoh Nauk, Vol VI, No 10, 1961,
pp 18-27. *USDA

Development of Socialist Agriculture, by S. Sdobnov, 16 pp.
RUSSIAN, per, Vest Statistiki, No 9, 1963, pp 3-12. JPRS 22514

USSR Agriculture in 1953 -- 1962 Statistic Materials, 23 pp.
RUSSIAN, per, Vest Statistiki, No 9, 1963, pp 79-95. JPRS 22514

Scientific
Agriculture (Contd)

A Drive for a Powerful Program of Improvements in Agriculture, by M. Terent'yev, 20 pp.
RUSSIAN, per, Voprosy Ekon, No 9, 1963, pp 4-15.

JPRS 22514

Certain Economic Problems in Improving Lagging Kolkhozes, by F. Ignatovskiy, 14 pp.
RUSSIAN, per, Voprosy Ekon, No 10, 1963, pp 17-26.

JPRS 22480

Major Forms of Quaternary Land Deposits in Sinkiang and Their Relationship to Landform and Climatic Developments, by Chou T'ing-ju, 62 pp.
CHINESE, per, Ti-li Hsueh-pao, Vol XXIX, No 2, Jun 1963, pp 109-125.

JPRS 22707

Preliminary Research into Forms of Agriculture in Kan-Tzu A-Pa Region, by Ch'eng Hung, 29 pp.
CHINESE, per, Ti-li Hsueh-pao, Vol XXIX, No 2, Jun 1963, pp 156-168.

JPRS 22707

Mangrove Plants in Eastern Asia, by Yudzuru Ogura.
JAPANESE, per, Botany and Zoology, Vol X, No 2, 1941, pp 145-149.

Dept of Interior
209(900) qUn33pr
No 360

On the Soils of the Saipan, Tenion and Rota Islands, Mariana. Part I & II, by Kawamura Kazumi, Tokuichi Tanaka.
JAPANESE, per, Journal of the Science of Soil and Manure, Vol XIV, No 7, 8, 1940, pp 439-484.

Dept of Interior
209(900) qUn33pr
No 374

High-Quality Seeds Are the Basis of Good Harvest, by Sh. Iasbadzar, 8 pp.
MONGOLIAN, per, Namyn Am'dral, No 9, 1963, pp 92-95.

JPRS 22534

Analysis of 1962 Operations in Agricultural Organizations, by Milovan Ivanovic, 9 pp.
SERBOCROATIAN, per, Glas Poljopriv i Zadruz Organiz, Vol III, No 10, 1963, pp 11-18.

JPRS 22810

Basic Problems of Concepts of Agricultural Development, by Svetozar Tosovic, 7 pp.
SERBOCROATIAN, per, Poljoprivreda, Vol XI, No 7, 1963, pp 1-6.

JPRS 22605

The Activity and Problems of the Agricultural Inspectorate, by Vlajko Toskic, 7 pp.
SERBOCROATIAN, per, Poljoprivreda, Vol XI, No 7, 1963, pp 7-11.

JPRS 22605

Cooperative Activity in Crop Production, by Milan Petrovic, 24 pp.
SERBOCROATIAN, per, Poljoprivreda i Zadrugarstvo, Vol X, No 10, 1963, pp 11-21.

JPRS 22605

Scientific
Biological & Medical Sciences

Defense of the Population From Bacteriological Weapons, by I. S. Bezdenezhhiiy, E. Tyrkov.
RUSSIAN, rpt, 1963.

*FTD-TT-64-29

Biosynthesis of Protein, by M. F. Gulyy.
RUSSIAN, bk, Biosintez Belka, 1963, 202 pp.

*FTD-TT-63-1219

Selected Articles From the Russian Book
Bol'shaya Meditsinskaya Entsiklopediya, Moscow.

Vol XXVIII, 1962.
Roentgen Machines, by V. Dmokhovskiy, 12 pp,
(pp 256-266).

JPRS 22213

Respirators, by Yu. Novikov, 8 pp,
(pp 452-456).

Vol XXIX, 1963, pp 601-605.
Sedatives, by M. Mashkovskiy, 6 pp.

JPRS 22438

Vol XXXI, 1963.
Physiological Effect of Sports on the Organism,
by A. Korobkov, 5 pp, (pp 207-212).

JPRS 22446

Sports and Children -- Sports and the Aged --
Sports and Women, by R. Motylyanskaya, 8 pp,
(pp 212-218).

Television in Medicine, by I. Akulinichev, 10 pp,
(pp 1186-1190).

Remote Control Gamma Units, by V. Khrushchev,
12 pp, (pp 1195-1207).

Tele-Curietherapy, by M. Domshlak, G. Nevskaya,
6 pp, (pp 1207-1212).

Electrocardiography in Sports Medicine, by
Lev Alekseyevich Butenko, 21 pp.
RUSSIAN, bk, Elektrokardiografiya v Sportivnoy
Meditine, Leningrad, 1963, pp 3-19; 124-126;
208.

JPRS 22508

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Book
Electronika v Meditsine, Moscow, 1960.

Current Radio Electronics and the Problems of Medicine and Biology, by V. G. Mavrodyadi, I. T. Akulinichev, (pp 38-50). *FTD-TT-63-1188

The Cardio-Cyclorrapny, by Ye. V. Akulinichev, G. G. Babskiy, et al, (pp 55-61). *FTD-TT-63-1189

The Electronencephaloscope With a Double Commutation, by V. N. Anan'yev, (pp 62-70). *FTD-TT-63-1190

Electronic Differentiating System for the Analysis of Physiological Processes, by Ye. B. Babskiy, V. L. Karpman, et al, (pp 71-78). *FTD-TT-63-1191

Electrical Measurements of Mechanical Quantities in Physiological Investigations, by Ye. B. Babskiy, Ya. S. Yakobson, (pp 79-90). *FTD-TT-63-1192

Some Problems of Recording Cardiac Sounds, by A. I. Koblenz-Mishke, (pp 110-119). *FTD-TT-63-1193

Technical Procedures for the Detection of Weak Bioelectric Responses, by V. A. Koznevnikov, (pp 120-129). *FTD-TT-63-1194

The Recording Systems in Electro-Medical Diagnostic Apparatus, by V. N. Livshits, N. A. Solov'yev, (pp 130-136). *FTD-TT-63-1195

Evaluation of the Systems of Differential Computers for Electrophysiological Investigations, by D. N. Menitskiy, (pp 143-148). *FTD-TT-63-1196

A Microapparatus for the Registration of Certain Physiologic Functions by Radio, by L. P. Shuvatov, (pp 177-182). *FTD-TT-63-1029

Apparatus for Electronarcosis, by V. B. Bolotov, N. M. Shcherbakov, (pp 239-241). *FTD-TT-63-1197

Electronic System for the Stimulation of the Electrical Activity of the Heart, by I. T. Akulinichev, Ye. B. Babskiy, et al, (pp 312-326). *FTD-TT-63-1198

Isotope Methods of Investigation of the Living Organism, by N. A. Gavelova, (pp 338-347). *FTD-TT-63-1199

Electronics and Industrial Hygiene, by P. M. Konin, V. A. Franke, et al, (pp 383-392). *FTD-TT-63-1200

Scientific
Biological & Medical Sciences (Contd)

Electron Microscopic Methods of Investigation of
Biological Objects, by V. I. Biryuzova,
RUSSIAN, bk, Elektronno-Mikroskopicheskiye Metody
Issledovaniya Biologicheskikh Ob'yektov, 1963,
203 pp.

*FTD-TT-63-217

Physiotherapy in Cosmetics, by T. F. Nazarova,
M. K. Karapetyan, et al, 9 pp.
RUSSIAN, bk, Fizioterapiya v Kosmetike, Moscow,
1963, pp 6-13.

JPRS 22424

Experimental Toxicology of Organic Phosphorus
Insecticides, by L. I. Medved, 58 pp.
RUSSIAN, bk, Gigiyena i Toksikologiya Novykh
Pestitsidov i Klinika Otravleniy, Chapter V,
Moscow, 1962, pp 188-256.

JPRS 22450

The Use of Vitamins as a Prophylactic and Medicinal
Measure for Diseases of Young Salmon in Hatcheries,
by E. M. Malikova, S. O. Apine.
RUSSIAN, bk, Ispolzovanie Vitaminov v Kachestve
Profilakticheskikh i Lechebnykh Sredstv pri
Zabolevaniakh Molodi Lososia na Rybovodnykh.

Dept of Interior
QH301 C273 No 398

Cholinergic Processes in Pathology, by
Daniil Yevseyevich Al'pern, 16 pp.
RUSSIAN, bk, Kholinergicheskiye Protsessy v Patologii,
1963, pp 230-245. (Conclusion & Table of Contents)

JPRS 22732

Study of Cortical Regulation of the Water and
Electrolyte Balance, by Z. T. Tursunov, 8 pp.
RUSSIAN, bk, Korkovaya Regulyatsiya Vodno-Solevogo
Obmena, Tashkent, 1963, pp 144-151.

JPRS 22523

Leukosis and Radiation, by Ye. D. Gol'dberg, 5 pp.
RUSSIAN, bk, Leykozy i Radiatsiya, 1963, pp 61-65.

JPRS 22520

Studies in Molecular Genetics and the Effect of
Radiation on Heredity, by N. P. Dubinin, 23 pp.
RUSSIAN, bk, Molekulyarnya Genetika i Deystviye
Izlucheniya na Nasledstvennost', Moscow, 1963,
pp 3-12, 236-239. (Forward, Introduction, Conclusion,
Table of Contents).

JPRS 22581

Molecular Genetics and Radiation Effects on Heredity,
by N. P. Dubinin.
RUSSIAN, bk, Molekulyarnaya Genetika i Deystviye
Izlucheniya na Nasledstvennost', Gosatomizdat, 1963,
238 pp.

*FTD-TT-63-1214

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Book
Reaktsiya Kletok na Ekstremal'nyye Vozdeystviya,
1963.

JPRS 22613

Effect of Cryoisis and Ultrasonic Vibrations on
Actomyosin, by M. A. Khenokh, G. P. Pinayev, et al,
11 pp, (pp 6-13).

Change in the Desoxyribonuclease Activity During
X-Ray Irradiation, by K. I. Pravdina, 17 pp,
(pp 114-124).

On the Mechanism of Cysteamine Protective Action,
by E. A. Val'dshteyn, 11 pp, (pp 126-133).

Radioresistance of Thermotolerant Strains of
Escherichia Coli, by V. D. Zhestyanikov, 12 pp,
(pp 135-142).

The Role of Functional Stress in the Localization of
Radiation Injury, 20 pp.
RUSSIAN, bk, Rol' Funktsional'noy Nagruzki v Lokalizatsii
Luchevogo Porazheniya, Tomsk, 1962, pp 3-5, 100-115.
(Introduction, Conclusions, Table of Contents)

JPRS 22586

The Role of Functional Load in Localization of
Radiation Injury, by N. V. Sokolova.
RUSSIAN, bk, Rol' Funktsional'noy Nagruzki v Lokalizatsii
Luchevogo Porazheniya, Tomsk, 1962, 144 pp.

*FTD-TT-63-1218

Studies on the Role of Nucleic Acids in Differentiation
and Malignant Degeneration, by Ya. G. Erenpreys, 10 pp.
RUSSIAN, bk, Rol' Nukleinovyykh Kislot v Differentsirovke i
Malignizatsii, Riga, 1963, pp 4-7; 38-40; 82, 83; 124, 125.
(Forward, Table of Contents).

JPRS 22590

Combination of Vibration and Noise Effects on Physiolog-
ical Shifts, by A. A. Akad'yevskiy, G. I. Rumyantsev.
RUSSIAN, rpt, Scientific Meeting, Hygienic Significance
of Vibration and the Clinical Aspects of Vibration
Sickness, 1962, pp 12-15.

*FTD-TT-63-1220

Variations in Physiological and Biochemical Changes
in Relation to the Total Parameters of Vibration.
RUSSIAN, rpt, Scientific Meeting, Hygienic Significance
of Vibration and the Clinical Aspects of Vibration
Sickness, Dec 1962, pp 12-15.

*FTD-TT-63-1221

Acoustic Parameters and Ultrasonic Visualization of
Organs and Tissues of Man and Animals, by I. Ye. El'piner,
32 pp.
RUSSIAN, bk, Ul'trazvuk Fiz Khim i Biolog Deystviye,
Moscow, 1963, pp 381-411.

JPRS 22840

Scientific
Biological & Medical Sciences (Contd)

Field Dosimeters-Radiometers Manufactured in the USSR,
by R. V. Petrov, V. N. Pravetskiy, et al, 13 pp.
RUSSIAN, bk, Zashchita ot Radioaktivnykh Osadkov,
1963, pp 172-182.

JPRS 22669

Therapeutic Effect of Neomycin in Experimental
Tularemia, by E. M. Tsvetkova.
RUSSIAN, per, Antibiotiki, Vol VIII, No 2, 1963,
pp 152, 153.

*USDA

Use of Aqueous Solutions of Polyvinylpyrrolidone
to Prolong the Action of Penicillin and Streptomycin,
by A. V. Kochetkova, G. B. Berkengeym, et al, 8 pp.
RUSSIAN, per, Antibiotiki, Vol VIII, No 12, 1963,
pp 1100-1105.

JPRS 22754

Reparative Regeneration of Cutaneous and Intestinal
Epithelia at the Anal Junction in Acute Radiation
Sickness, by K. M. Svetikova, 13 pp.
RUSSIAN, per, Arkhiv Anatomii Gistol i Embriol,
Vol XLV, No 10, 1963, pp 51-58.

JPRS 22556

Changes in the Transitional Epithelium After the
Action of Ionizing Radiation, by A. V. Zhuravlev,
13 pp.
RUSSIAN, per, Arkhiv Anatomii Gistol i Embriol,
Vol XLV, No 10, 1963, pp 59-66.

JPRS 22556

On the Possibility of Division of Cortical Neurons,
by R. V. Ivannikova, 5 pp.
RUSSIAN, per, Byul Eksper Biol i Meditsiny, Vol LV,
No 1, 1963, pp 93-95.

JPRS 22690

Studying Human Taste Sensitivity Under Prolonged
Oxygen Respiration With a Pertinent Dietary, by
N. S. Zayko, M. I. Kuznetsov, 5 pp.
RUSSIAN, per, Byul Eksper Biol i Meditsiny, Vol LVI,
No 8, 1963. 9689834

FTD-TT-63-1013

Use of Automatic Logical Devices, Computers, for
Medical Control, by R. M. Bayevskiy, Ye. A. Zil'bertal,
9 pp.
RUSSIAN, per, Byul Eksper Biol i Meditsiny, Vol LVI,
No 8, 1963. 9689834

FTD-TT-63-1013

Hybrids and Self-Pollinated Lines of Sugar Corn at
the Opytno-Selektsionnaya Stantsiya of the Vsesoyuznyy
Institut Rastenievodstva in Krymsk, by N. N. Tkachenko,
N. V. Gavrilov.
RUSSIAN, per, Byul Vses Inst Rastenievod, Vol IX, 1961,
pp 3-9.

*USDA

Scientific
Biological & Medical Sciences (Contd)

Initial Material for Breeding Winter Wheat for
Resistance to Damping-Off, by E. S. Strutsovskaya.
RUSSIAN, per, Byul Vses Inst Rasteniyevod, Vol IX,
1961, pp 44-47.

*USDA

Selected Articles From the Russian Periodical
Dok Ak Nauk SSSR,

Vol CLI, No 4, 1963, pp 982-986. *NASA TT F-197
Content of Nonesterified Fatty Acids in the
Blood Plasma of Rats Subjected to G-Forces,
by A. A. Gyurdzhyan.

Vol CLII, No 1, 1963, pp 75-77. JPRS 22608
The Arrangement of Intermediate Information When
Computing on Nonerasing Turing Machines, by
N. V. Belyakin, 5 pp.

Vol CLII, No 2, 1963. JPRS 22666
Variations of RNA in Giant Chromosomes of
Chironomus Dorsalis During Metamorphosis and
Experimental Effects, by I. I. Kiknadze,
I. T. Filatova, 7 pp, (pp 450-453).

Chemiluminescence of Lipids and the Rate of
Growth of Pacific Salmon, by A. I. Zhuravlev,
V. P. Korzhenko, 9 pp, (pp 457-460). JPRS 22663

The Polyspermy-Blocking Mechanism in Echinoderms,
by A. S. Ginzburg, A. N. Severtsov, 9 pp, (pp 501-504) JPRS 22664

Vol CLII, No 4, 1963. JPRS 22587
Morphological and Cytochemical Changes in Oocytes of
the Sterlet and Sturgeon Under the Influence of
Parasitism by Polypodium Hydriiforme Ussov Coelenterata,
by Ye. V. Raykova, 6 pp, (pp 985-988).

The Effect of Suprarenal Hormones on the Radiation
Sensitivity of the Chromosomal Apparatus of
Epithelial Cells of the Mouse Cornea, by Yu. Ya. Kerkis,
V. V. Logvinova, 5 pp, (pp 992-994). JPRS 22522

Determination of the Degree of Spiraling of Trans-
port RNA by the Fluorescent Properties of Their Com-
plexes With Acridine Dyes, by O. F. Borisova,
L. L. Kiselev, et al, 7 pp, (pp 1001-1004). JPRS 22521

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Dok Ak Nauk SSSR. (Contd)

Vol CLII, No 4, 1963.
Serotonin in Developing Embryos of the Sea Urchin
Strongylocentrotus Drobachiensis, by G. A. Buznikov,
I. V. Chudakova, 6 pp, (pp 1014-1016). JPRS 22587

Vol CLII, No 5, 1963.
Variation in the Content of Fission Products of
Cystoseira in the Black Sea, by V. V. Glazunov,
V. P. Parchevskiy, et al, 8 pp, (pp 1222-1224). JPRS 22714

The New Types of Chromosome Rearrangement Developing
in the Microspores of *Tradescantia Paludosa* Under
the Influence of Several Factors of Space Flight,
by N. L. Delone, P. R. Popovich, et al, 9 pp,
(pp 1227-1230). JPRS 22585

Vol CLII, No 6, 1963, pp 1461-1464.
Detection of the Localization of Nucleoprotides in
Oocytes of Frogs, *Rana Temporaria* by Means of
Ultraviolet and Luminescent Microscopy, by
V. N. Shalumovich, N. S. Gabayeva, 5 pp. JPRS 22693

Analysis of the Effect of Physical Strain, High Environmental
Temperature and High Oxygen Content in Inspired
Air on the Excitability of the Visual Analyzer in Man,
by A. O. Navakatikyan, V. V. Lebedeva, et al, 11 pp.
RUSSIAN, per, Fiz Zhur SSSR imeni I. M. Sechenov,
Vol XLIX, No 9, 1963, pp 1036-1043. JPRS 22735

Adequatometric Investigation of the Visual and Auditory
Analyzers of Man in the Process of Adaptation to Climatic
Conditions, by B. A. Funtikov, 9 pp.
RUSSIAN, per, Fiz Zhur SSSR imeni I. M. Sechenov, Vol XLIX,
No 9, 1963, pp 1044-1049. JPRS 22735

The Agreement to Ban the Testing of Nuclear Weapons,
6 pp.
RUSSIAN, per, Gig i San, Vol XXVIII, No 10, 1963, pp 3-7. JPRS 22552

Technological Progress in the Chemical Industry of the
USSR and Industrial Hygiene, by A. S. Arkhipov, 7 pp.
RUSSIAN, per, Gig Truda i Professional Zahol, Vol VII,
No 11, 1963, pp 3-8. JPRS 22731

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Iz Ak Nauk SSSR, Ser Biol.

No 2, 1963, pp 270-282. 9690026 FTD-TT-63-1010
New Freely Living Nitrogen Fixing Microorganisms,
by N. P. L'vov, 23 pp.

No 4, 1963, pp 514-525. 9217199 AEC-Tr-6112
Frequency of Chromosome Aberrations as a Function
of Irradiated Intensity and Physiological Condition
of Barley Seed, by N. I. Nuzhdin, R. L. Dozortseva,
et al, 22 pp.

No 6, 1963. JPRS 22838
Microbiological Principles for Regulation of the
Ensilage Process, by Ye. N. Mishustin,
V. A. Mirozoyeva, 18 pp, (pp 785-797).

Chemical Preservation of Very Damp Fodder, by
M. T. Taranov, 27 pp, (pp 808-829).

The Use of Chemical Agents and Biologically Active
Preparations in Animal Husbandry, by V. Kocherezkin,
8 pp, (pp 924-928).

Parasites of Freshwater Fish and Biological Basis for
Their Control, 236 pp.
RUSSIAN, per, Iz Gosud Nauch-Issledov Inst Ozernogo i
Technogo Rybnogo Khoz, Vol XLIX, 1960.

Dept of Interior
SH211 E82 No 464
PL-480

Selected Articles From the Russian Periodical
Iz Sibirskogo Otdel Ak Nauk SSSR, Ser Biol - Medit
Nauk, No 8(2), 1963.

Some Methodological Problems of Biocoenology, by
L. I. Nomokonov, 13 pp, (pp 34-43). JPRS 22525

The Connection of Bioluminescence of Bacteria With
Respiration, by R. I. Chumakova, 8 pp, (pp 62-67). JPRS 22527

Algae of the Ob' River and the Novosibirsk Water
Supply, by A. V. Solonevskaya, 8 pp, (pp 79-84). JPRS 22527

The Condition of the Phytoplankton of the Novosibirsk
Reservoir With a Normal Head, by G. D. Levadnaya,
8 pp, (pp 85-90). JPRS 22527

Phenogenetic Analysis of Variability in Plant Populations,
by V. A. Dragavtsev, 13 pp.
RUSSIAN, per, Khabarshy, No 10, 1963, pp 33-42. JPRS 22718

Scientific
Biological & Medical Sciences (Contd)

The Main Trends in the Synthesis of Antihypertensive Drugs, by M. V. Rubtsov, 12 pp.
RUSSIAN, per, Medit Prom SSSR, Vol XVII, No 10, 1963, pp 6-14.

JPRS 22524

Some Developmental Prospects of Medical Electronics in Czechoslovakia, 5 pp.
RUSSIAN, per, Medit Prom SSSR, Vol XVII, No 10, 1963, pp 55-58; 62-64.

JPRS 22551

The Present and Future Uses of Cybernetics in Medicine, by Yu. Frolov, 5 pp.
RUSSIAN, np, Medit Rabotnik, 16 Aug 1963, p 3.

JPRS 22647

Criticism and Bibliography Cosmic Biology and Medicine, by L. Gol'dfarb, 5 pp.
RUSSIAN, np, Medit Rabotnik, 5 Oct 1962, p 4. 9689832

FTD-TT-62-1591

The Humoral Component in the Effect of Bone Marrow Transplantation on Dogs With Acute Radiation Sickness, by Chang Ts'ung-hsien, 8 pp.
RUSSIAN, per, Medit Radiolog, Vol VIII, No 8, 1963, pp 48-53.

JPRS 22591

Reasons for the Failure of Antibiotic Therapy of Auto-Infection in Radiation Sickness, by I. D. Meter, 11 pp.
RUSSIAN, per, Medit Radiolog, Vol VIII, No 8, 1963, pp 58-65.

JPRS 22625

International Conference on the Diagnosis and Treatment of Contamination by Radioactive Isotopes, Vienna, 15-18 October 1962, by Yu. I. Moskalev, 26 pp.
RUSSIAN, per, Medit Radiolog, Vol VIII, No 8, 1963, pp 77-87.

JPRS 22610

Selected Articles From the Russian Periodical Mikrobiologiya.

Vol XXXII, No 2, 1963. 9690027
Effect of Light Intensity on the Use of CO₂ and Organic Compounds During the Photosynthesis of Chloropseudomonas Ethylicum, by R. M. Balitskaya, Ye. N. Knodratyeva, 10 pp, (pp 193-199).

FTD-TT-63-1009

On the Relationship Between the Physiological State and Medium Duration of Fluorescence of Bacterio-chlorophyll in Cells of Photosynthesizing Bacteria, by A. B. Rubin, L. K. Osnitskaya, 7 pp, (pp 200-203).

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Mikrobiologiya. (Contd)

Vol XXXII, No 4, 1963. 9690033 FTD-TT-63-1016
Automatic Temperature Control Systems, by
V. N. Chernov, V. P. Drevush, 8 pp.

Effect of Illumination and Temperature on the
Formation of Dunaliella Salina Pigment, by
Ye. S. Mil'ko, 11 pp.

Effect of Concentrations of Various Medium
Components on the Growth and Nitrogen-Fixation
of Bluish-Green Algae, by Mokhamed Samekh Takha,
12 pp.

Powerful Grams NRV-- Petroleum Growth Substance, by
V. Gernik.
RUSSIAN, per, Nauka i Zhizn', No 10, 1963, pp 24-27. *USDA

Nitrogen Balance of Infants Fed on Ionite Milk in
Acute Gastrointestinal Diseases, 8 pp.
RUSSIAN, per, Pediatriya, Vol XLII, No 11, 1963,
pp 33-37. JPRS 22713

Main Trends of Scientific Research on Tuberculosis,
by F. V. Shebanov, 7 pp.
RUSSIAN, per, Problemy Tuberkuleza, Vol XLI, No 9,
1963, pp 3-7. JPRS 22589

Economic Damage Caused by the Foot-and-Mouth Disease,
by S. Poplaukhin.
RUSSIAN, per, Sel'skoye Khoz Sibirii, No 4, 1961,
pp 51, 52. *USDA

Standardization of Epidemiologist Work, by
O. M. Khromchenko, N. A. Vinogradov, 12 pp.
RUSSIAN, per, Sovet Zdravookraniye, Vol XXII, No 10,
1963, pp 34-41. JPRS 22634

On the Question of the Effect of Meteorological Factors
on the Vascular Tone, by V. Ya. Chekin, 5 pp.
RUSSIAN, per, Terapev Arkhiv, Vol XXV, 1953, pp 71-73.
9690264 Navy Tr 3712
NRL 956

Accelerometric Precordial BCG in Hypertensive Disease,
by I. Ye. Oranskiy.
RUSSIAN, per, Terapev Arkhiv, Vol XXXIV, 1962, pp 27-32. *NASA TT F-198

Scientific
Biological & Medical Sciences (Contd)

Epizootiology of the Foot-and-Mouth Disease in the
Azerbaijan SSR, by I. I. Manafov, N. A. Baboshina.
RUSSIAN, per, Trudy Azerbaydzhan Nauch-Issledov
Veterinarnyy Inst, Vol XIII, 1962, pp 5-15.

*USDA

The Value of Antibiotics in Artificial Rearing of
Young Salmon, by E. M. Malikova, N. I. Kotova.
RUSSIAN, per, Trudy LatvNIRO, Vol III, 1961,
pp 431-443.

Dept of Interior
QH301 C273 No 397

The Passage of Migrating Atlantic Salmon and Vimba
Spawners Through the Fish Way of the Kegum Hydro-
Electric Station, by E. A. Kayrov, Z. I. Chudova.
RUSSIAN, per, Trudy Latv-NIRO, Vol III, 1961,
pp 479-493.

Dept of Interior
QH301 C273 No 399

The Daily Rhythm of Feeding Among Fingerling Salmon,
by F. Ya. Pinsky.
RUSSIAN, per, Trudy LatvNIRO, Vol III, 1961,
pp 495-503.

Dept of Interior
QH301 C273 No 400

Problem of Typifying the Virus of Foot-and-Mouth
Disease, by K. A. Arifdzhanov.
RUSSIAN, per, Trudy Uzbek Nauch-Issledov Veterinarnyy
Inst, Vol XIV, 1961, pp 3-5.

*USDA

Problems of the Mechanism of the Biological Effect of
Microwaves, by A. S. Presman, 25 pp.
RUSSIAN, per, Uspekhi Sovrem Biol, Vol LVI, No 2,
Sep, Oct 1963, pp 161-179.

JPRS 22580

The Influence of Electrosleep on the Thermoregulation
Reflex and Electric Resistance of the Skin in
Patients With Pruritic Dermatoses, by L. D. Burovetsky,
6 pp.
RUSSIAN, per, Vest Dermatologii i Venerologii,
Vol XXXIV, 1960, pp 19-21. 9690555

DDC RSIC-105

Radio Biological Research in Poultry Breeding,
by Kh. F. Kushner.
RUSSIAN, per, Vest Sel'skoh Nauk, No 9, 1963,
pp 72-80.

*USDA

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Veterinariya.

Vol XXXVIII, No 2, 1961, pp 37, 38. *USDA
Application of Bee Glue Ointment of Control
Foot-and-Mouth Disease in Cattle, by I. F. Kazakov,
Yu. Sh. Abizarov.

Vol XXXVIII, No 10, 1961, pp 70, 71. *USDA
Survival of Foot-and-Mouth Disease Virus in
Products of Slaughtered Cattle, by S. G. Poplaukhin.

Vol XXXIX, No 10, 1962, pp 54, 55. *USDA
Process of Foot-and-Mouth Disease in Reindeers,
by S. E. Ogryzkov.

Vol XL, No 6, 1963, pp 20-26. JPRS 22629
Activities of the Kazan Veterinary Institute,
by V. M. Koropov, 8 pp.

Vol XL, No 11, 1963. *USDA
Experience in Foot-and-Mouth Disease Eradication,
by G. A. Kozlovskiy, (pp 19-27).

The Role of Ixodes Ticks in the Epizootiology
of Foot-and-Mouth Disease, by A. M. Lukin,
(pp 28-30).

Post-Vaccinal Immunity Against Foot-and-Mouth
Disease in Young Cattle, by B. A. Glushko,
(pp 30, 31).

The Effect of Vaccines Against Anthrax, Foot-and-Mouth
Disease, and Emphysematous Carbuncles on the
Immunologic Reaction of Cattle and Sheep Vaccinated
Against Brucellosis, by O. Yu. Yusupov, (pp 34-36).

Eradication of Hog Cholera Among Sucklings Pigs
of Autumn and Winter Farrows, by M. G. Pogonyalo,
(p 37).

Complications After the Use of Glycerinized Crystal
Violet Vaccine Against Hog Cholera, by I. P. Annenkov,
V. Ya. Varyushin, (pp 38-43).

Hog Cholera Eradication From Farms in Voronezh
Oblast, by V. I. Barkovskiy, S. I. Solov'yev,
(pp 50, 51).

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Veterinariya. (Contd)

Vol XL, No 11, 1963.
In the Foot-and-Mouth Disease Focus, by
D. A. Bocharov, (pp 63-65).

*USDA

Summary of Results of Two Years' Work of
Producing and Inspecting Lapinized Foot-and-Mouth
Disease Antigens of Types O, A, and S, by
S. E. Voynov, (pp 69, 70).

Adaptation of the Foot-and-Mouth Disease
Virus Type O to the Body of Adult White Mice
and the Study of Immunobiological Properties
of the Adapted Foot-and-Mouth Disease Virus, by
Abdel' Malek Butros Bulos, (pp 71, 72).

Review of the Epizootic Disease Situation in
Various Countries in 1962, by Ya. R. Kovalenko,
(pp 77-79).

Selected Articles From the Russian Periodical
Voprosy Filosofii.

Vol XVII, No 5, 1963.
On Principles of the Classification of Whole
Systems, by V. G. Afanas'yev, 19 pp, (pp 31-43).

JPRS 22615

Relationship of Structure and Elements, by
L. O. Val't, 14 pp, (pp 44-53).

On the Subject and the Structure of the Course,
Principles of Scientific Communism, by
M. S. Dzhunusov, 9 pp, (pp 118-123).

Vol XVII, No 6, 1963, pp 155-158.
The Subject and Methods of Modern Biophysics,
by Yu. N. Polyanskiy, 7 pp.

JPRS 22830

Distribution of Freshwater Fish of the Holarctic
Neogene and Zoogeographic Regionalization, by
V. N. Yakovlev, 17 pp.
RUSSIAN, per, Voprosy Ikhtiolozii, Vol I, No 2, 1961,
pp 209-220.

JPRS 22603

Relative Fertility of Fish and Roe Size, by
A. I. Zotin, 12 pp.
RUSSIAN, per, Voprosy Ikhtiolozii, Vol 1, No 2,
1961, pp 307-313.

JPRS 22503

Scientific
Biological & Medical Sciences (Contd)

Effect of Various Pond-Raising Conditions of This Year's Brood of Carp on Their Parasitofauna, by V. M. Ivasik, 10 pp.

RUSSIAN, per, Voprosy Ikhtiologi, Vol I, No 2, 1961, pp 347-353.

JPPS 22603

Some Peculiarities of the Utilization of Endogenic Fat With Partial Fasting and Physical Load, by M. N. Logatkin, 15 pp.

RUSSIAN, per, Voprosy Pitaniya, Vol XXII, No 5, 1963, pp 27-34. 9690029

FTD-TT-63-1014

Comparative Nutritional Value of Meat Dehydrated by the Method of Thermal Atmospheric Desiccation and by Sublimation, by V. P. Karandayeva.

RUSSIAN, per, Voprosy Pitaniya, Vol XXII, No 6, 1963, pp 12-15.

*ACSI I-3920
ID 2253821

Regular Psychological Patterns in the Process of Analysis, by A. M. Matyushkin, 27 pp.

RUSSIAN, per, Voprosy Psicholog, Vol III, 1960, pp 46-56.

Navy Tr 3664
NMS 831

The Process of Speech Sound Discrimination, by L. A. Chistovich, Yu. A. Klass, et al, 32 pp.

RUSSIAN, per, Voprosy Psicholog, No 6, 1962, pp 26-39. 9689732

Emmanuel Coll
Res Lang Ctr
E-T-R-63-10

In the Bacteriological Seat of Infection, by L. Dmitriyeva.

RUSSIAN, per, Voyennyye Znaniya, No 7, 1963, pp 34-36.

*ACSI I-3922
ID 2253823

Plant Protection Through Biophysics, by S. V. Andreyev, V. K. Martens, 6 pp.

RUSSIAN, per, Zashchita Rasteniy ot Vrediteley Bolezney, No 10, 1963, pp 10-13.

JPRS 22434

Serological Investigations in Plague. V: Methods of Accelerated Selection of Pasteurella Pestis Strains by the Yield of Fraction I, by M. I. Levi, A. G. Momot.

RUSSIAN, per, Zhur Mikrobiol, Epidemiol i Immunobiol, No 2, 1963, pp 88-93.

*USDA

Scientific
Biological & Medical Sciences (Contd)

Controversial Problems With Modern Teachings of
Regeneration, by A. N. Studitskiy, 27 pp.
RUSSIAN, per, Zhur Obshch Biol, Vol XXIV, No 4,
Jul, Aug 1963, pp 241-260.

JPRS 22578

Cytological Analysis of the Radiosensitivity of
Similar Tissues in Different Species of Mammals,
by G. A. Chudinovskaya, O. N. Kitayeva, 13 pp.
RUSSIAN, per, Zhur Obshch Biol, Vol XXIV, No 6,
1963, pp 435-444.

JPRS 22778

Selected Articles From the Russian Periodical
Zool Zhur.

Vol XXXIX, No 2, 1960, pp 263-276.
Zoobenthos and Nutrition of Benthophagous
Fish in Lake Dalaynor, Chinese People's
Republic, by Liu Cheng-tsung, 22 pp.

JPRS 22687

Vol XLII, No 8, 1963.
Variability of Coregonus, by Yu. S. Reshetnikov,
20 pp. (pp 1187-1199).

JPRS 22469

Mammalian Fauna of Southeastern Karakum and Its
Change Resulting From the Construction of the
Karakum Canal, by O. N. Nurgel'dyyev, 18 pp,
(pp 1232-1244).

JPRS 22474

Seventh Conference on the Problems of Hydrobiology
of Inland Waters, by V. I. Zhadin, 5 pp,
(pp 1283-1285).

JPRS 22473

Vol XLII, No 10, 1963.
The Rhythm of Evolution of S. M. Yablokov-Khnzoryan,
16 pp. (pp 1433-1445).

JPRS 22702

The Taxonomic Position and Evolutionary Significance
of Forms Created in the Acclimatization of Animals,
by L. V. Shaposhnikov, 8 pp, (pp 1446-1452).

Seasonal Variation of Bunodera Luciopercae
O. F. Muller 1776 and Sphaerostoma Bramae O. F. Muller
1776, Trematodes Under the Conditions of Karelia,
by R. P. Malakhova, 11 pp, (pp 1453-1461).

Energy Expenditure in Locomotion of Shrimps, by
V. S. Ivlev, 9 pp, (pp 1465-1471).

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the Russian Periodical
Zool Zhur. (Contd)

Vol XLII, No 10, 1963.

JPRS 22702

Growth Characteristics of the Pike *Esox Lucius* L.,
by L. N. Domanivskiy, 13 pp, (pp 1539-1545).

Book Review of *Zhivotnyy Mir Volgogradskoy Oblasti Animal Kingdom of Volgogradskaya Oblast*, by N. V. Shchepot'yev, B. S. Kubantsev, et al, 5 pp, (pp 1587-1589).

The Influence of the Caesarean Section of the Peripheral Leucocyte Analysis, by G. Malek, E. Mojziskova, et al.

CZECH, rpt, I Clinica Ostetrico-Ginecologica Dell'Universita Carlo IV, Prague, No 2, Mar, Apr 1958,
pp 1-24.

*FTD-TT-63-1153

Anatomy of Thoracic Channel and Main Collecting Lymphatic Channel of Human Trunk, by D. A. Jdanov.
FRENCH, per, Acta Anatomica, Vol XXXVII, 1959,
pp 20-47.

*Navy/NMS

Statistical Assessment of the Biological Data on the Early Detection of Occupational Lead Poisoning, by M. Fautrel.
FRENCH, per, Archives des Maladies Professionnelles, de Medecine du Travail et Securite Sociale, Vol XIX, 1958, pp 5-20.

*AEC

An Attempt at Pancreas Homograft Into the Liver of Depancreatized Dogs, by F. Arloing, 5 pp.
FRENCH, per, Bulletin Societe Sciences Vet de Lyon, Vol XXXVI, 1933, pp 117-120.

Navy Tr 3665
NMS 832

Method of Preventive and Curative Immunization of Plants, and Preparation of Hygienic Plant Products, 8 pp.
FRENCH, Patent No 693,723.

Patent Office

Process for Production of Condensation Products, by Th. A.G. Goldschmidt, 6 pp.
FRENCH, Patent No 879,689.

Patent Office

The Nature and the Uses of the Kiel Bone Chips, by R. Naatz, A. Bauermeister, 17 pp.
GERMAN, rpt, Melsunger Med Pharmazeut Mitteil Wissen u. Praxis, No 97.

Navy Tr 3670
NMS 837

Osteosynthesis With Preserved Bone, by W. Kueppermann, V. Schwier, 15 pp.
GERMAN, rpt, Melsungen Med Pharmazeut Mitteil Wissen u. Praxis, No 99.

Navy Tr 3669
NMS 836

Scientific
Biological & Medical Sciences (Contd)

Selected Articles From the German
Periodical Beitrage zur Klinischen Chirurgie,
Brunn's.

Vol CCIII, No 1, 1961.
Preservation of Heteroplastic Bone, by
P. F. Nockemann, Hans Schilling, 19 pp.

Navy Tr 3672
NMS 389

Vol CCIII, No 3, 1961.
Treatment of Cysts, Tumors and Inflammatory
Processes in Bones With the Kiel Bone Chips,
by Armin Bauermeister.

*Navy/NMS

Treatment of the Inner Malleolus
Pseudoarthrosis With a Keel Chip, by Richard Maatz,
8 pp.

Navy Tr 3663
NMS 830

Vol CCV, No 1, 1962.
Clinical Experience With a Heteroplastic Bone
Material, by H. Schilling, P. F. Nockemann,
14 pp.

Navy Tr 3671
NMS 838

A New Local Anesthesia, by Gerd Griesser, 10 pp.
GERMAN, per, Deutsche Medizinische Wochenschrift,
Vol LXXXII, 1957, pp 2071-2073.

Navy Tr 3668
NMS 835

Osteosynthesis With Preserved Bone, by
W. Kueppermann, 5 pp.
GERMAN, per, Monatsschrift fuer Unfallheilk, Vol LX,
No 3, 1957, pp 74-78.

Navy Tr 3666
NMS 833

Osteosynthesis With Cortical Screws, by
W. Schwier, 6 pp.
GERMAN, per, Monatsschrift fuer Unfallheilk,
Vol LX, No 4, 1957.

Navy Tr 3667
NMS 834

New Developments in the Struggle Against
Silicosis, by F. Keienburg.
GERMAN, per, Schlagel und Eisen, No 2, 1963,
pp 89,90.

BISI 3515

Annual Report of the Leadership of the Medical
Division, Hungarian Academy of Sciences, by
Antal Babics, 21 pp.
HUNGARIAN, per, A Magyar Tudomanyos Akademia
V. Orvosi Tudomanyok Osztalyanak Kozlemenyei,
Vol XIV, No 2, 1963, pp 111-128.

JPRS 22491

Inactivation of the Aphthous Virus by Means of
Gamma Radiation, by B. Baldelli, A. Begliomini,
et al.
ITALIAN, rpt.

*AERE-Harwell

Scientific
Biological & Medical Sciences (Contd)

Reports on Cephalic Fertility, Sterility, and Infertility, by Giorgio Malek, Eva Silinkova Malkova. ITALIAN, rpt, Secondo Simposio Italiano Sulla Sterilita, Varenna, Lago do Como, Italia, May 1961, 6 pp.

*FTD-TT-63-1155

Lysozyme in Plasma and in Leukemic Leukocytes, by D. Barbieri, M. Gunesi, 10 pp. ITALIAN, per, Haematologica, Vol XXXVIII, 1954, pp 891-898. 9216789

AEC-Tr-6079

Several Properties of Vocal Cord Vibrations Observed From the Vibrations of the Tracheal Outer Wall, by S. Hiki, T. Sugimoto, 5 pp. JAPANESE, rpt, Radio Communications Research Center, 1961. 9689727

Emmanuel Coll
Res Lang Ctr
E-T-J-63-4

Orchidaceae Novae Micronesicas I, by Takasi Tuyama. JAPANESE, per, Botan Magazine, Vol LIII, No 626, 1939, pp 52-59; 91,92.

Dept of Interior
209(900)
qUn34pr No 695

Simuliidae of the Lublin District, by Wladzimirz Zwolski, 25 pp. POLISH, per, Annales Universitatis Mariae Curie-Sklodowska, Sec C, Vol XIII, No 14, 1956, pp 231-259. 9216498

OTS 61-11343
PL-480

Creation and Judicious Use of Drug Supplies, by Onoriu Iliescu, Ion Mateescu, 5 pp. RUMANIAN, np, Muncitorul Sanitar, Vol XV, No 40, 5 Oct 1963, p 3.

JPRS 22432

Proceedings of the National Conference on Pharmaceutics, Bucharest, 14-16 November 1963. RUMANIAN, np, Muncitorul Sanitar, 23 Nov 1963, p 2.

JPRS 22762

Unitary Theory of Human Behavior, by F. T. Cantu Garza, Javier Tercero Barragan. SPANISH, per, Revista Med, Vol IX, No 32, 1963, pp 5-18.

*Navy/NMS

On Measures for the Future Development of the Science of Biology and Strengthening Its Ties With Practice, 7 pp. UKRAINIAN, per, Dopovidi Ak Nauk Ukrain SSR, No 7, 1963, pp 976-979.

JPRS 22181

Scientific
Chemistry

Biogeochemistry of Sulfur, by S. I. Kuznetsov, 18 pp.
RUSSIAN, per, Iz Ak Nauk SSSR, No 5, 1963, pp 668-680.

JPRS 22672

Fastening of Rubber to Metal With the Aid of the
Products of Oxidation of Rubber, by B. A. Dogadkin,
A. D. Poyarkova, 13 pp.
RUSSIAN, per, Kauchuk i Rezina, No 2, 1963, pp 32-36.
9690345

FTD-TT-63-831

The Structure of Boronized Layers, by A. N. Minkevich.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved Chern Metall,
No 5, 1963, pp 162-169.

HB 5986

The Surface Energy of Certain Oxides, Sulfides and
Selenides, by S. N. Zadumkin, V. Kh. Khulamhanov, 5 pp.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved Fiz, No 4, 1962,
pp 112-114. 9216578

NASA TT F-167

Biochemical Changes in Meat Resulting From Ionizing
Radiation, by V. V. Pal'min.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved Pishchevaya
Tekhnolog, No 2, 1962, pp 76-81.

*ACSI I-3918
ID 2253819

Diagram I-x For a Steam-Hydrogen System, by
Anatol Seletsky, Aleksander Blyum, 6 pp.
RUSSIAN, per, Khim Prom, No 5, 1960, pp 411-413.
9690534

DDC RSIC-106

The Chemistry of Polymers With Conjugated Bonds,
by A. A. Berlin, 35 pp.
RUSSIAN, per, Khim Prom, No 12, 1962, pp 881-896.
9216795

AEC-SCL-T-512

Determination of the Dispersive Efficiency of Oils
With Added Detergents, by A. M. Rabikobiche,
G. C. Vinner, 7 pp.
RUSSIAN, per, Khim i Tekh Topliv i Masel, 1960,
pp 57-61. 9215992

ACSIL Tr 1410

The Influence of Polymethylsiloxane Fluid on the
Properties of Motor Oils, by I. F. Blagovidov,
M. S. Borovaya.
RUSSIAN, per, Khim i Tekh Topliv i Masel, Vol VIII,
No 6, 1963, pp 52-57.

OT 7502

Gelzircon in Alkalic Pegmatites, by E. I. Semenov.
RUSSIAN, per, Trudy Inst Mineralogii Geokhim i
Kristallokhim Redkikh Elementov, Vol IV, 1960,
pp 85-90.

Dept of Interior
G(570) Ac122m22E

Scientific
Chemistry (Contd)

The Phase Method of Polarography, by G. V. Tuyev,
L. S. Zaretskiy.
RUSSIAN, per, Zavod Lab, Vol XXIX, No 11, 1963,
pp 1291-1293.

HB 5606

A Thermodynamic Study of Thorium Oxychloride, by
Fan' Gun-fan, Li Shao-chzhun, et al, 9 pp.
RUSSIAN, per, Zhur Neorgan Khim, Vol VIII, No 1,
1963, pp 89-93. 9217204

AEC-Tr-6073

Effect of Concentration of Perchloric Acid on Its
Thermal Decomposition, by V. P. Babayeva,
A. A. Zinov'yev, 11 pp.
RUSSIAN, per, Zhur Neorgan Khim, Vol VIII, No 3, 1963,
pp 567-672. 9690025

FTD-TT-63-832

Explosions in Sandy Grounds, by V. M. Tsvetkov, 10 pp.
RUSSIAN, per, Zhur Prik Nekh i Tekh Fiz, No 5, 1962,
pp 150-153. 9216794

AEC-UCRL-Tr-
995(L)

New Progress in Tetracycline Chemistry, by Tai Li-hsin,
46 pp.
CHINESE, per, K'uo-hsueh T'ung-pao, No 9, 1963, pp 27-42.

JPRS 22766

Thermal Stability of Polyformaldehyde, by Jiri Mejzlik.
CZECH, per, Chemicky Prumsyl, Vol XII, 1963, pp 461-464.

*Navy/APL J313

Contribution to Experimental Determination of Diffusion
Parameters of Gases in the Atmosphere, by L. Nemec, 8 pp.
CZECH, per, Meteorologické Zpravy, Vol XVI, No 3, 4,
31 Aug 1963, pp 66-68.

JPRS 22767

Sealing and Welding of Carbon Materials by Means of
Hydrocarbon Cracking, by R. Blanchard, C. Moreau, et al.
FRENCH, rpt, Nineteenth International Congress of
Pure and Applied Chemistry, London, 10-17 Jul 1963.

*AERE-Harwell

The Existence of the Uranyl Ion, by C. Duval.
FRENCH, rpt, Proceedings of the International Feigl
Anniversary Symposium on Analytical Chemistry,
Birmingham University, England, 9-12 Apr 1962, 1963,
pp 388-393.

*AERE-Harwell

Preparation and Properties of Some Pure Polyethylene
Glycols and of Their Nitrates, by P. Aubertin.
FRENCH, per, Memorial des Poudres, Vol XLI, 1959,
pp 57-64.

TIL T-5342

Frequency Displacements in the System Water/p - Dioxane,
by Hartmut Fritzsche, 6 pp.
FRENCH, per, Spectrochimica Acta, Vol XVII, 1961,
pp 352-355. 9216844

AEC-UCRL-Tr-
994(L)

Scientific
Chemistry (Contd)

Thin-Layer Chromatography, by Kurt Randerath.
GERMAN, bk, 250 pp.

Academic Press

Polarographic Research in Regulation of the Dropping
Rate by Restraining of the Droplet. I. The Dependence
of Polarographic Currents on the Dropping Rate, by
D. Wolf.

GERMAN, rpt, Journal of Electroanalytical Chemistry,
No 5, 1963, pp 186-194.

*AEC

Evaluation of the Quality of Mixtures With any Law
of Distribution for the Grain Weight of the Individual
Components of the Mixture, by K. Stange.

GERMAN, per, Abhandlungen der Braunschweigischen
Wissenschaftlichen Gesellschaft, Vol V, 1953, pp 164-186.

*AECR-Marwell

Selected Articles From the German Periodical
Archiv fuer Eisenhuettenwesen.

Vol XXX, 1959, pp 637-640.

*BISI 3559

Influence of Mn and Si on Diffusion of C in
Austenite, W. Steiner, O. Krisement.

Vol XXXIV, 1963.

*BISI 3519

Activities in the System Calcium Oxide-Phosphoric
Acid at 1650°C, by K. Schwerdtfeger, H. J. Engell,
(pp 647-652).

Derivation of Equations to Determine the Extent of
Chemical Conversions Between Liquid Phases in the
State of Rest and in the Mobile State, by H. Schenck,
E. Steinmetz, (pp 659-672).

*BISI 3520

Use of High Frequency Plasma Flames as Light Sources
for Spectrochemistry, by J. van Calker, W. Tappe,
(pp 679-683).

*BISI 3544

A New Method for the Paper Chromatography of Dispersed
Dyes, by Jaroslav Janoushak, 5 pp.
GERMAN, per, Faserforschung und Textiltechnik, Vol VIII,
1957, pp 339-340. 9690552

DDC RSIC-102

The Effect of Light on the Dissolved Salts of Silver
in the Presence of Zinc Oxide, by Emil Baur, A. Perret,
7 pp.

GERMAN, per, Helvetica Chimica Acta, No 7, 1924,
pp 910-915. 9216850

AEC-Tr-6024

On the Elements of Aeration, by Heribert Grubitsch,
Tenho Sneek, 18 pp.
GERMAN, per, Monatshefte fuer Chemie und Verwandte
Teile Anderer Wissenschaften, Vol LXXXVI, No 5, 1955,
pp. 752-764.

Navy Tr 3692
NRL 957

Scientific
Chemistry (Contd)

Improving the Testing Method for Determining the Susceptibility of Steel to Stress Corrosion, by Wilhelm Radeker, 10 pp.
GERMAN, per, Stahl und Eisen, Vol LXXXIII, No 8, 1953, pp 485-492. 9216843

AEC-Tr-6141

Neutron Activation Analysis in Strong Neutron Absorbers, by F. Baumgartner, 6 pp.
GERMAN, per, Z fuer Elektrochemie, Vol LXIV, No 8, 9, 1960, pp 1077-1080. 9215989

ACSL Tr 1427

Neutron Activation, by W. Schulze, 7 pp.
GERMAN, per, Z fuer Elektrochemie, Vol LXIV, No 8, 9, 1960, pp 1083-1088. 9215987

ACSL Tr 1428

Leap Lipides as a Source of Fatty Acids Essential in the Diet, by Gino Secchi, 7 pp.
ITALIAN, per, Rassegna Chimica per il Chimico e per l'Industria, No 3, 1963, pp 118-121.

ACSI I-3536
ID 2250280

Synthesis of a Nickel Oxide Single Crystal by the Verneuil Method, by Johshu Nakazumi, 20 pp.
JAPANESE, per, Journal of the Chemical Society of Japan, Vol LIX, No 11, 1956, pp 1304-1308. 9689737

Emmanuel Coll Res
Lang Ctr E-T-J-63-3

Chemical Composition and Optical Properties of Synthetic Mica, and Microscopic Studies, by Inakichi Noda, Yukio Sugiyama.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol XLVI, No 8, 1943, pp 760-762.

Dept of Interior
209(900) qLn33pr
No 371

Earth Sciences & Astronomy

Aeromagnetic Survey in Geology, by L. C. Kitayenko.
(DC-10216)
RUSSIAN, bk, Aeromagnitnaya C'emmka v Geologii, 1963, pp 1-123.

*JPRS

Atlas of the Index Fossils of Western Siberia, by L. L. Chalfin.
RUSSIAN, bk, Atlas Rukovodishchikh Form Iskopаемых Fauny i Flory Zapadnoi Sibiri, Moscow, Vol I, 1955.

Dept of Interior
(690) qTaE

The Results of the Testing of a New Pendulum Apparatus, Developed in the Gravimetric Laboratory of TaNiigaik, by M. E. Chejfez.
RUSSIAN, bk, Central Scientific Research Institute for Geodesy, Aerophotogrammetry and Cartography.

ACIC

Scientific
Earth Sciences & Astronomy (Contd)

Two Inclinometers for Measurement of the Gravitational Effect, by V. V. Radziyevskiy.

RUSSIAN, bk, Dva Neklonomera Dlya Izmereniya Gravitatsionnogo Effekta.

ACIC

The Galaxy, by G. M. Idlis.
RUSSIAN, bk, Galaktika.

ACIC

Selected Articles From the Russian Book
Geomagnitnyye Vozmushcheniya, Sbornik Statey,
IGY Program, Section III, No 4, 1960, 9216579

NASA-TT-F-105

Secular Variations of the Geomagnetic Field of the East Antarctic, by S. M. Mansurov, 6 pp.

Some Peculiarities of Variations in the Vertical Component of the Magnetic Field of the Earth in the Arctic Ocean, by L. N. Zhigalov, 7 pp.

Synoptic Charts of Magnetic Disturbance in the Arctic, 10 pp.

On the Nature of the Coastal Effect, by Ye. A. Ponomarev, 10 pp.

Stationary Microvariation Station With Photoelectronic Amplification, by N. V. Lipskaya, N. A. Denizkin, 8 pp.

Analysis of Latitudinal Variations in the Yearly Course of Magnetic Activity, by V. M. Mishin, 11 pp.

Very Large and Large Geomagnetic Storms and Some Problems in Their Theory, by V. I. Afanas'yeva, Yu. D. Kalinin, 14 pp.

Free Air Anomalies and Isostasy, by B. A. Andreyev.
RUSSIAN, bk, Gravitatsionnyye Anomalii Faya i Izostaziya. ACIC

The Study of the Gravity Field of Siberia, by B. L. Shneyerson.
RUSSIAN, bk, Issledovaniye Gravitatsionnogo Polya Sibiri. ACIC

Meteoritics.
RUSSIAN, bk, Meteoretika. ACIC

New Methods in Astronomy, 154 pp.
RUSSIAN, bk, Novaya Tekhnika v Astronomii, Moscow-Leningrad, 1961, pp 3-36; 80-104; 108-117; 136,137; 142-158; 169-175. JPRS 22696

Scientific
Earth Sciences & Astronomy (Contd)

On the Relationship Between Local Gravity Anomalies
and the Tectonics of Oil and Gas Bearing Regions, by
I. O. Tsime1'zon.

RUSSIAN, bk, O Soctnosheniakh Mezdu Lokal'nymi
Anomaliyami Sily Tyazhesti i Tektonikoy Neftegazonosnykh
Oblastey.

ACIC

Basic Regularities in the Distribution of the Gravitational
Field Elements of Tartar Republic and Trends in Prospecting
for Deep-lying Structures, by A. G. Salikhov.

RUSSIAN, bk, Osnovnyye Zakonomernosti Raspredeleniya
Elementov Gravitatsionnogo Polya i Puti Poiskov
Glubinnykh Struktur.

ACIC

The Periodic Motions of a Particle Under Gravitation
of Rotating Triaxial Ellipsoid, by Yu. V. Batrakov.
RUSSIAN, bk, Periodicheskiye Dvizheniya Chastitsy v
Pole Tyagoteniya Vrashchayushchegosya Trekhosnogo
Ellipsoids.

ACIC

Aurorae and Airglow, by Z. V. Karyagina, et al.
RUSSIAN, bk, Polyarnyye Siyaniya i Svecheniye
Nochnogo Neba, Section IV, No 8, 1962, pp 1-66.

*NASA TT-F-201

Aurorae and Airglow, by L. M. Fishkova, et al.
RUSSIAN, bk, Polyarnyye Siyaniya i Svecheniye
Nochnogo Neba, Section IV, No 9, 1962, pp 1-63.

*NASA TT F-202

The Constant of Lunar Parallax, by F. Kh. Perlin.
RUSSIAN, bk, Postoyannaya Lunnogo Parallaksa.

ACIC

Potential of the Terrestrial Attraction, by
I. D. Zhongolovich.
RUSSIAN, bk, Potentsial Zemnogo Prityazheniya.

ACIC

About Conformity of Values of the Isostatic and
Bouguer Anomalies, by P. Ya. Galushko.
RUSSIAN, bk, Pro Vidpovidnist' Znachen' Izostatichnykh
i Anomaliy Buge.

ACIC

Problem of Geological Interpretation of the Regional
Gravitational Field of the Transcaucasian Lowland, by
M. S. Abakelya.
RUSSIAN, bk, Problema Geologicheskoy Interpretatsii
Regional'nogo Gravitatsionnogo Polya Zakavkazskoy
Nizmennosti.

ACIC

The Sea of Okhotsk, by A. K. Leonov.
RUSSIAN, bk, Regional'naya Okeanografiya, Part I,
1960, pp 193-195; 197-233; 238-239; 241-276; 279-288.

*Navy/IO Tr 200

Scientific
Earth Sciences & Astronomy (Contd)

Gravity in Paratsk, Sviyazhsk, and Raifa in the
Tatar Republic From Determinations of 1930, by G. Agafonov,
S. Nekrasova.

RUSSIAN, bk, Sila Tyazhesti v Paratske, Sviyazhskie i
Raife v Tatarskii po Opredeleniyam 1930 Goda.

ACIC

A Correlation Between the Structural Relief and
Gravity Anomalies, by B. A. Andreyev.

RUSSIAN, bk, Sootnosheniye Mezhdu Strukturnym
Rel'yefom i Anomaliyami Sily Tyazhesti v Sluchayakh
Neskol'kikh Granits Razdela Ptnosti.

ACIC

Relationship Between the Structure of Gravimetric
Field in the Central Kazakhstan and the Regions of the
Early Hercynian Lithologic Facies, by M. S. Bykova,
D. N. Kazanli.

RUSSIAN, bk, Svyaz' Strukturny Gravimetriceskogo Polya
Tsentral'nogo Kazakhstana s Rannegertsinskimi Litologo
Fatsial'nymi Oblastyami.

ACIC

Tectonics of the Deep Parts of Earth's Crust According
to Gravimetric Data, by Ye. N. Lyustikh.
RUSSIAN, bk, Tektonika Glubokikh Chastey Zemnoy Kory
po Gravimetriceskim Dannym.

ACIC

Achievements in Meteoric Astronomy During 1958-1961,
by I. S. Astapovich, V. V. Fedynskiy.
RUSSIAN, bk, Uspekhi Meteoricheskoi Astronomii v 1958-1961.

ACIC

Upper Mantle and Influence Upon the Development of
Earth's Crust, by V. A. Magnitskiy.
RUSSIAN, bk, Verkhnyaya Mantiya i Yeye Vliyaniye na
Razvitiye Zemnoy Kory.

ACIC

Stellar Astronomy, by V. Zom, K. Rudintskiy. (DC-10231)
RUSSIAN, bk, Zvezdnaya Astronomiya, 1959, pp 1-130;
136-148.

*JPRS

Settling Time of a Fixed Amount of Oxygen in the
Atmospheres of Planets Containing Water Vapor, by
E. K. Byutner, 7 pp.
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXXXVIII, No 5,
1961, pp 1050-1053. 9215844

NASA TT F-86

Soviet Review of Weather Modification Techniques, by
M. Zayko, 6 pp.
RUSSIAN, per, Grazhdan Aviats, No 11, 1963, pp 22, 23.

JPRS 22609

Scientific
Earth Sciences & Astronomy (Contd)

Lower Carboniferous Deposits of the Middle Tien Shan and the Talas-Fergana Fault, by V. S. Burtman, 21 pp.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Geolog i Razv, No 9, Oct 1962, pp 29-42.

JPRS 22852

Some New Data on the Structure of Chondrites, by L. G. Kvasha, 17 pp.
RUSSIAN, per, Meteoritika, No 20, 1961, pp 124-136. 9690226

AID Report
T-63-122

Problems of Radioactivity, by B. A. Nelepo, 11 pp.
RUSSIAN, per, Okeanologiya, Vol II, No 3, 1962, pp 457-463.

Navy Tr 3686
HO 209

Information on the Radioactivity of the Pacific Ocean Water, by Yu. I. Kirilyuk, 5 pp.
RUSSIAN, per, Okeanologiya, Vol II, No 4, 1962, pp 743-745.

Navy Tr 3685
HO 208

Strontium-Ninety in the Surface Water of the Atlantic Ocean, by N. I. Popov, E. G. Azhazha, 7 pp.
RUSSIAN, per, Okeanologiya, Vol II, No 5, 1962, pp 845-848.

Navy Tr 3687
HO 210

Dividing the Pelagic Section of the Northwestern Part of the Pacific Ocean Into Biogeographical Areas, by V. G. Bogorov.
RUSSIAN, per, Sbornik Dokladov na II Plenume Komissii po Rybokhozyaystvennomu Issledovaniyu Zapadnoy Chasti Tikhogo Okean, 1962, pp 62-72.

*Navy/
HO Tr 219

The Basis of Methods for Calculating Evaporation From Routine Measurements of Meteorological Stations, by A. R. Konstantinov, 77 pp.
RUSSIAN, per, Trudy Gosudar Gidrolog Inst, No 54(108), 1956, pp 5-74. 9216501

CTS 63-11015
PL-480

Marine Fouling on Vessels Cruising the Sea of Azov and Kerchanskiy Proliv Kerch' Strait, by E. M. Lebedev, 28 pp.
RUSSIAN, per, Trudy Inst Okeanologii, Vol XLIX, 1961, pp 118-136.

Navy Tr 3684
HO 176

Diurnal Variation of Cloudiness in the Territory of the USSR, by O. D. Kodrau.
RUSSIAN, per, Trudy Leningrad Glavnaya Geofiz Obser, No 142, 1963, pp 22-31.

*FTD-TT-63-1205

Scientific
Earth Sciences & Astronomy (Contd)

Fluctuation of High-Altitude Planetary Frontal
Zones During Natural Synoptic Periods, by M. A. Duytseva,
D. A. Ped' 12 pp.
RUSSIAN, per, Trudy Tsentral Inst Prognozov, Vyp. 120,
Sinoptiko-Statisticheskiye Metody Dolgosrochnykh-
Prognozov Pogody, 1963, pp 34-43.

JPRS 22741

Forecasting the AT 500 for the Northern Hemisphere for
Three-Five Days, by N. I. Zverev, 6 pp.
RUSSIAN, per, Trudy Tsentral Prognozov, Vyp. 120,
Sinoptiko-Statisticheskiye Metody Dolgosrochnykh
Prognozov Pogody, 1963, pp 44-48.

JPRS 22741

Forecasting the Deformation of a High-Altitude Planetary
Frontal Zone During Natural Synoptic Periods, by D. A. Ped',
11 pp.
RUSSIAN, per, Trudy Tsentral Inst Prognozov, Vyp 120,
Sinoptiko-Statisticheskiye Metody Dolgosrochnykh
Prognozov Pogody, 1963, pp 49-57.

JPRS 22741

Soviet Seismologists Visit United States of America,
by Ye. S. Borisevich, 5 pp.
RUSSIAN, per, Vest Ak Nauk SSSR, Vol XXXIII, No 10,
1963, pp 75-79.

JPRS 22464

Determination of the Coefficients of Turbulent
Diffusion in the Sea With the Aid of Radioactive
Indicators, by B. A. Nelepo.
RUSSIAN, per, Vest Moskov Univ Ser III Fiz i Astron,
Vol IV, 1960, pp 64-71.

*Navy/
HO Tr 217

1962 Activity of the All-Union Mineralogical Society,
by S. P. Solov'yev, 23 pp.
RUSSIAN, per, Zapiski Vses Mineralog Obshch, Vol XCII,
No 4, 1963, pp 499-508.

JPRS 22635

The Geological Institute of the Bulgarian Academy of
Science in the Service of Science and Geological Practice
by E. Bonchev, 11 pp.
BULGARIAN, per, Priroda, Vol XII, No 4, pp 119-124.

JPRS 22844

Guidebook for the Machurian Geological Excursion
Second Group Fou-hsin Ling-yuan District, by
Riuji Endo, Wataru Muroi.
CHINESE, bk.

Dept of Interior
209(900) qUn33pr
No 325

Guidebook for the Manchurian Geological Excursion Seventh
Group Liao-tung Area.
CHINESE, bk.

Dept of Interior
209(900) qUn34pr
No 696

Scientific
Earth Sciences & Astronomy (Contd)

Survey Report on the Geology From Kou-pei-ying-tzu
to Ping-chuan Along the Projected Jehol Railway Line,
by Shutaro Ushimaru.
CHINESE, rpt.

Dept of Interior
209(900) qUn33pr
No 323

Determination of the Interpolation Error of
Astronomic-Geodetic Plumb-Line Deflections in
West Bohemia Kraj, by Milan Bursa, 14 pp.
CZECH, per, Prace Geodysikalnino Ustavu Seskoslovenske
Akademie Ved, No 162, 1962, pp 11-23.

JPRS 22538

The Universe of Science, by Charles-Noel Martin.
FRENCH, bk, 208 pp.

Hill & Wang

Adoption of an International Formula of Normal
Gravity, by Gino Cassinis.
FRENCH, rpt, Sur l'Adoption d'une Formule Internationale
Pour la Pesanteur Normale.

ACIC

The Gamma Astronomy, by B. Schatzman.
FRENCH, per, Space Science Reviews, Vol I, No 4,
1963, pp 774-779.

*Navy/NRL

Canon of Eclipses, by Theodor Ritter von Oppolzer.
GERMAN, bk, 376 pp.

Dover Pub House

Aneroid Sea-Gravimeter, by H. Haalck.
GERMAN, rpt, Das Aneroid-Seegravimeter.

ACIC

The Exact Extrapolation of Gravity Anomalies, by
K. Arnold.
GERMAN, bk, Exacte Extrapolation von Schwerkraum-Anomalien.

ACIC

The Methods of Free-Air Reduction and Isostatic Reduction
in Their Reciprocal Relationship, by K. Arnold.
GERMAN, bk, Die Methoden der Freiluftreduktion und der
Isostatischen Reduktion in Ihren Gegenseitigen
Beziehungen.

ACIC

Precision Motion of the Earth and the Orbit of Artificial
Earth's Satellites, the Flattening of Earth, and the
Density Distribution in the Interior of the Earth, by
K. Arnold.
GERMAN, rpt, Die Praezessionsbewegung der Erde und der
Bahn der Kuenstlichen Erdsatelliten, die Abplattung der
Erde und die Dichteverteilung in Erdinnern.

ACIC

Scientific
Earth Sciences & Astronomy (Contd)

The Mathematical Treatment of Airy's Isostasy, With
an Expansion of the Square of Sea-Level Elevations
in Spherical Harmonics, by Karal Jung.

GERMAN, bk, Die Rechnerische Behandlung der Airy'schen
Isostasie Mit Einer Entwicklung des Quadrats der
Meereshoehen Nach Kugelfunktionen.

ACIC

The Relations Between the Newest Method of the Theory
of Earth's Figure, by K. Arnold.

GERMAN, bk, Relationen Zwischen Neueren Verfahren
der Theorie der Figur der Erde.

ACIC

The Relief and Bottom Structure of the Strait of
Gibraltar, by Otto Jessen, 5 pp.

GERMAN, rpt, Die Strasse Von Gibraltar, Sec III, 1927,
pp 56-62.

Navy Tr 3683
HO 167

The Boundary Conditions at the Earth's Surface During
Atmospheric Diffusion Processes, by F. Wipperman, 17 pp.

GERMAN, per, Beitrage Zur Physik der Atmosphare, Vol XXXII,
No 1, 2, 1959, pp 43-52. 9689736.

Emmanuel Coll Res
Lang Ctr E-T-G-63-26

Gold in Sea Water, by Fritz Haber, 42 pp.

GERMAN, per, Z fuer Angewandte Chemie, Vol XL, 1927,
pp 303-314. 9689730.

Emmanuel Coll Res
Lang Ctr E-T-G-63-23

Report on the Applied Geology of the Ying-cheng-tzu
and Cha-koi Districts Kwan-tung Province, South
Manchuria, by Hiroshi Ozaki.

JAPANESE, rpt.

Dept of Interior
209(900) qUm33pr
No 327

Geology of Volcano Yatsuga-Take and Near-by Volcanoes,
by Naomasa Yamasaki.

JAPANESE, rpt.

Dept of Interior
209(900) qUm34pr
No 721

Isotope Geology Makes Progress, by Yomiuri Shimbun,

JAPANESE, bk.

Dept of Interior
209(900) qUm34pr
No 715

An Experiment on the Strain of Sonde Aneroid Barometer,
5 pp.

JAPANESE, per, Journal of Meteorological Research, Vol X,
1958, pp 70-72. 9690557

DDC RSIC-110

Some Problems Concerning the Calculation of the
Gravitational Elements Outside the Earth, by M. Tiron.

RUMANIAN, bk, Citeva Probleme Privind Calculul
Elementelor Cimpului Gravitational Exterior al Pamintului. ACIC

Scientific
Electronics

Electrochemistry of Germanium and Silicon, by
E. A. Efimov, I. G. Erusalimchik.
RUSSIAN, bk, 199 pp.

Sigma Press

Long Range Propagation of Ultrashort Waves, by
M. P. Dolukhanov.

RUSSIAN, bk, Dal'neye Rasprostraneniye Ul'trakorotkikh Vолн,
Chapters V-VII, 1963, pp 4-6; 31-91, Enc1 No 1 to *ACSI I-3925
2213111263. ID 2245023

Electron and Ion Emission, by L. N. Dobretsov, 348 pp.
RUSSIAN, bk, Elektronnaya i Ionnaya Emissiya, Moscow,
1952, 304 pp. 9216357

NASA TT F-73

Problems of the Statistical Radar Theory.

RUSSIAN, bk, Voprosy Statisticheskoy Teorii Radiolokatsii,
1963, 417 pp. *FTD-TT-63-1209

Basic Concepts in Determining the Stability of Power Systems,
by D. I. Azar'yev, V. A. Venikov, et al, 17 pp.
RUSSIAN, per, Elektrichestvo, No 11, 1963, pp 1-8. JPRS 22631

Problems of Using Electric Motors in Agriculture, by
A. M. Musin, 6 pp.
RUSSIAN, per, Elektrotekh, No 11, 1963, pp 8-10. JPRS 22631

Experimental Electric Transmission Line, 6 pp.
RUSSIAN, per, Energetik, No 11, 1963, pp 43-46. JPRS 22748

The Hydro Resources of Azerbaijan and Their Full
Utilization, by S. S. Drozdovskiy, 7 pp.
RUSSIAN, per, Gidrotekh Stroitel, No 11, 1963, pp 3-5. JPRS 22631

Use of Recirculators for Compression of Frequency-
Modulated Pulses, by V. V. Lebedev, 12 pp.
RUSSIAN, per, Radiotekh, Vol XVIII, No 11, 1963,
pp 62-70. JPRS 22706

Certain Problems of Automation, by V. D. Mironov, 5 pp.
RUSSIAN, per, Teploenergetika, No 12, 1963, pp 7-10. JPRS 22774

Some Dielectric Characteristics of Epoxy Resin
Insulation, by E. K. Doliver.
RUSSIAN, per, Vest Elektroprom, Vol XXXIII, No 12,
1962, pp 16-19. OT 7510

New Types of Power Used in Agricultural Production,
by M. G. Evreinov, 5 pp.
RUSSIAN, per, Vest Sel'skikh Nauk, No 7, 1960, pp 81-84.
9216500 OTS 63-11053
PL-480

Scientific
Electronics (Contd)

Automatic Control System Analysis and Synthesis,
by Chih-yeh Shu.
CHINESE, rpt, Shang-hai-Shik K'o Hsuech Chi Shu
Luf Wen Histun Chi, Vol I, 1962, pp 293-359.

*FTD-TT-64-24

Mechanical Pumps for Test Circuits 1 and 10 MW,
by J. Baumier.
FRENCH, rpt, 20 Feb 1962.

*AEC

The Noise-Time of Response Compromise in Direct
Current Period Meters. A New Type of Circuit, by
G. Friedling.
FRENCH, rpt, Le Compromis Bruit-Temps de Response
dans les Periodometres a Courant Continu. Un Nouveau
Type de Circuit, 1961.

*AEC

Measurement of Constant Light Sensitivity, Variable
Light Sensitivity, and Time Constants of a Thermal
Radiation Detector, by Lothar Kramer, 13 pp.
GERMAN, per, Jenaer Jahrbuch, Part I, 1963, pp 77-92.

ACSI I-3521
ID 2246310

Heat Removal From Gas-Cooled Power Reactors, by
Dieter Smidt, 33 pp.
GERMAN, per, Nukleonik, Vol III, No 6, 1961,
pp 257-267. 9216047

AEC-Tr-6053

Number of Possible Stretches in Directional Radio
Connections With the 7-GHz-Portable Radio Telephone
Bridge, by R. Schienemann, 16 pp.
GERMAN, per, Telefunken-Zeitung, Vol XXXIV, No 133,
Sep 1961, pp 221-231.

ACSI I-3187
ID 2244395

Impulse Galvanization - A Method of Electrically
Combating Pain and Promoting Blood Circulation,
by H. Gaier, F. Schuhfried, 7 pp.
GERMAN, per, Wiener Klinische Wochenschrift, Vol LXXI,
No 44, 1959, pp 845-846. 9690558

DDC RSIC-111

Charge of the Positive Plate of Lead Storage
Battery in Relation to the Change in the Size
and Form of the Reaction Materials, by Shigeo Hisano,
10 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXII, 1959,
pp 376-377.

Navy Tr 3688
NRL 949

Changes Caused by Electrolytic Reduction in the
Size and Form of a Lead Compound With Little
Solubility in the Electrolyte, by Shigeo Hisano, 18 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXII, 1959,
pp 378-381.

Navy Tr 3689
NRL 950

Scientific
Electronics (Contd)

Analog Analyzer Short, by Zbigniew Szoplinski, 14 pp.
POLISH, per, Prace Katedry Automatyki i Telemechaniki
Politechniki Warszawskiej, 1959, pp 1-16. 9216499

OTS 61-11306
PL-480

Direct Distance Dialing in Mexico, by Erik Wallsten,
22 pp.
SPANISH, rpt, Ingenieria Mecanica y Electrica, Mexico,
No 177, 1963, pp 45-68. (Call No TA 4 148, No 177, Eng Tr) Army Map Service

Manual of Communications.
SPANISH, rpt, Manual de Commicacoes, MA - C - 101.

ACIC

Scientific
Engineering

Selected Articles From the Russian Book
Avtomatischeskoye Regulirovaniye Aviadvigateley,
Moscow, No 3, 1961. 9690462

PTD-TT-63-746

Investigation of Dynamic Characteristics of
Temperature Sensors for a Retarded Air Flow,
by G. P. Stepanov, Yu. N. Kulikov, 34 pp.

The Problem of Automatic Control of a Power
Plant, by A. A. Shobyakov, R. V. Yakovleva,
19 pp.

One Method of Selecting Regulator Schemes and
Parameters, by N. P. Kolpakova, S. I. Rybnikov,
9 pp.

Determining the Law of Control of Acceleration
of a Turbo-Jet Engine, by N. P. Kolpakova, 5 pp.

Equivalence of Various Diagrams of Closed
Antisurge Regulators, by I. F. Yudin, 11 pp.

Signal Conversion During Simulation of the
Dynamic Properties of Gas-Turbine Engines,
by O. B. Vlasov-Vlasyuk, 27 pp.

Combustion in Turbulent Flow, by L. N. Khitrih,
148 pp.
RUSSIAN, bk, Gorenje v Turbulentnom Potoke,
Moscow, 1959. 9217124-V

OTS 62-11035
PL-480

Analysis of Light Water Highly Enriched Uranium
Lattices With and Without Hafnium, Tested in
the Alize II Installation, by J. Bailly,
R. Delayre, et al, 11 pp.
RUSSIAN, rpt, Light Water Lattices, 28 May-1 Jun 1962,
pp 167-175. 9216057

AEC-Tr-6031

Selected Articles From the Russian Report
Merzlotnyye Issledovaniya, Moscow, No 1, 1961.

JPRS 22701

Application of the Resistance Method of
Electrical Prospecting in Hydraulic Construction
Surveys in Conditions of Perennially Frozen
Rock, by V. P. Dobrovol'skiy, 19 pp, (pp 190-207).

Specific Electrical Conductivity of Frozen
Rock in the Natural Structure in the Region of
the City of Igarka, by A. A. Ananyan, 10 pp,
(pp 208-215).

Scientific
Engineering (Contd)

Selected Articles From the Russian Report
Merzlotnyye Issledovaniya, Moscow, No 1, 1961. (Contd)

JPRS 22701

Specific Electrical Conductivity of Frozen
Rock in the Natural Structure of the Region of
the City of Salekhard, by A. A. Ananyan,
V. P. Dobrovolskiy, 11 pp, (pp 216-226).

Use of Radio Station Broadcast Field in
Mapping Contacts of Perennially Frozen Strata,
by A. D. Frolov, 10 pp, (pp 227-235).

New Developments in Pneumatic-Hydraulic Automation,
by M. A. Ayzerman, 203 pp.

RUSSIAN, bk, Novoye v Pnevmo-Gidravlicheskoy Avtomatike,
Moscow, 22 Oct 1962, pp 1-160.

JPRS 22570

Heat Engineering and Hydrodynamics, by
M. A. Stryrikovich, G. E. Kholodovskiy, 94 pp.
RUSSIAN, mono, Proceedings of the All-Union
Conference on the Use of Radioactive and Stable
Isotopes and Radiation in the Peoples Economy and
in Science, 1-12 Apr 1957, Moscow, Vol IV.

Dept of Interior
TK9008 U58
No 4206

Ideal Jet Combination Engines, by A. V. Kvasnikov,
47 pp.

RUSSIAN, bk, Rabochiye Protsessy Teplovykh Dvigateley,
1962, pp 5-47. 9690030

FTD-TT-63-864

Spectroscopic Determination of the Concentration
of the BO₂ Radical in an Explosion, by A. D. Rusin,
V. M. Tatevskiy.
RUSSIAN, per, Bulletin Moscow University, No 3,
1962, pp 21-23.

Navy Tr 3698
APL T424

Tentative Method for Calculations of the Dispersion
of Discharges in the Atmosphere, 6 pp.
RUSSIAN, per, Byul Stroitel Tekh, No 11, 1963,
pp 29-31.

JPRS 22598

The State of Soviet Power Engineering at the Time
of the Forty-Sixth Anniversary of the October Revolution,
6 pp.
RUSSIAN, per, Elektrich Stants, No 11, 1963, pp 3-5.

JPRS 22774

The SVV-1 Modulated Light Telemeter and the
Results of Its Tests, by V. A. Velichko.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved Geodez i
Aerofotos, No 2, 1957, pp 37-54.

*FTD-TT-63-1154

Scientific
Engineering (Contd)

Arc-Weld Reconditioning of Thick-Walled High-Pressure
Vessels, by G. Kh. Farber, D. G. Nikitina.
RUSSIAN, per, Khim Mashinostroy, No 4, 1963, pp 29-32.

HB 6108

The Question of Determining the Technical-Economic
Efficiency of Standardization, Normalization and
Unification in Machine Building, by V. S. Zamalin,
V. I. Timoshevskiy, 7 pp.
RUSSIAN, per, Mekh i Avtomat Proiz, No 11, 1963,
pp 36-38.

JPRS 22659

Electrical Network Construction at Port Moorings,
by L. Kirpichnikov, Kharif, 5 pp.
RUSSIAN, per, Morskoy Flot, No 3, 1963, pp 17-19.

ACSI I-3636
ID 2251709

Generalized Dependencies for Heat Emission
During Blistered Boiling of Liquids, by
D. A. Labuntsov, 16 pp.
RUSSIAN, per, Teploenergetika, Vol VII, No 5,
1960, pp 76-81. 9689972

DDC RSIC-101

Ultrasonic Vibration for Cleaning the
Piston Rings of Internal Combustion Engines,
by A. P. Gindis.
RUSSIAN, per, Vest Mashinostroy, Vol XLIII,
No 2, 1963, pp 72-74.

HB 6147

Laying Pipeline Facilities in Permafrost Soils
of Noril'sk, by M. V. Kim, 6 pp.
RUSSIAN, per, Vodosnabzheniye i Sanit Tekh,
No 7, 1963, pp 11-13.

ACSI I-3905
ID 2253815

Universal Chromathermographic Apparatus for
Analyzing Complex Gas Mixtures, by N. M. Turkel'taub,
A. A. Zhukovitskiy, 10 pp.
RUSSIAN, per, Zavod Lab, Vol XXIII, 1957,
pp 1120-1124.

Patent Office

Tunisia Enters the Era of Solar Energy, by
Salah al'Amiri, 9 pp.
ARABIC, np, Assabah, 13, 14 Nov 1963, p 6.

JPRS 22765

Contemporary State of Rolling-Mill Building
in the USSR, by A. A. Korolev, 190 pp.
CZECH, rpt, Soucasny Stav Vyroby Valcovacich
Zarizeni v SSSR, 1961, pp 119-243. 9690491-V.

FTD-TT-62-1216

Coke Properties and Blast Furnace Performance,
by K. Scheidig, G. Gruson.
CZECH, per, Hutnickie Listy, Vol XVIII, 1963,
pp 15-17.

*BISI 3525

Scientific
Engineering (Contd)

Selected Articles From the French Report
Cycles de Combustibles Pour Reacteurs de
Puissance, Baden-Baden, 9-14 Sep 1963.

*AEC

Contribution to the Study of the U233-Th232
Cycle in Fast-Neutron Reactors, by
P. Clauzon, A. Kania, et al.

Optimization of Fuel Cycles Within the
Framework of a Dynamic Program of Installed
Power, by J. Gauzens, L. Thiriet.

The Fuel Cycle in France for the Number of
Natural Uranium -- Graphite -- Gas Reactors,
by R. Boussard, G. Jeanpierre, et al.

Utilization of Plutonium in Fast Neutron
Reactors, by J. Bussac, A. Kania.

Fuel Cycles of Gas-Cooled, Heavy-Water Power
Reactors, by R. Naudet, M. Salesse.

The Adaptation of the C.T.I.F. Regenerator to
Cupola Plant, for Preheating the Blast to
500°C, by M. G. Ulmer.

FRENCH, per, Fonderie Belge, No 2, 1963,
pp 55-61.

*BISI 3539

Thermal Attack Under Vacuum in the Measurement
of Austenitic Grain Size, by M. T. Tiger,
P. Detrez.

FRENCH, per, Les Memoires Scientifique de la
Revue de Metallurgie, Vol LX, 1963, pp 513-530.

*BISI 3571

Trail of Prototypes of De-Dusting Plant in the
French Power Stations Bag-Houses and
Hydraulic De-Dusters, by J. Patary.

FRENCH, per, Revue Generale de Thermique, Vol XI,
No 17, 1963, pp 583-608.

*BISI 3567

Hydraulic Laboratories - Their Role in the
Development of Modern States, by J. Vennin, 11 pp.
FRENCH, per, La Revue Maritime, No 196, Feb 1963,
pp 171-187.

Navy Tr 3662
ONI 968

Pursuit of High Driving Rate in Blast Furnace,
by R. Paschal.

FRENCH, per, Revue Metall, Vol LX, No 7, 8, 1963,
pp 623-629.

*BISI 3529

Scientific
Engineering (Contd)

Experimental Studies of Some Physical Phenomena
in Top-Blowing Processes, by E. Denis.
FRENCH, per, Revue Universelle des Mines,
Sep 1963, pp 367-383.

*BISI 3538

Automation of Rolling Mills: Present and
Future Outlook, by R. Geoffroy.
FRENCH, per, Technique Moderne, Vol LIV,
Dec 1962, pp 41-46.

BISI 3214

Automated System for Cutting Off Billets, Using
a Computer, by P. Jeget.
FRENCH, per, Technique Moderne, Vol LIV, Dec 1962,
pp 57-59.

BISI 3215

The Effect of Interference Factor in Stereo Measure-
ments by Anaglyphic Method, by Rafaat Helmy.
GERMAN, rpt, Einfluss Des Stoerfaktors bei
Stereomessungen mit Anaglyphen.

ACIC

Control Possibilities and Operational Advantages
With Continuous Temperature Measurement in
Top-Blowing Steelmaking Processes, by W. A. Fischer,
H. J. Fleischer.
GERMAN, rpt, Paper Presented at the International
Congress on Oxygen Steel Plants at Le Touquet
and Dunkirk, 23-26 Sep 1963.

BISI 3477

Selected Articles From the German Periodical
Archiv fuer Eisenhuttenwesen, Vol XXXIV, 1963.

The Significance of Available Energy in the
Thermodynamic Investigation of the Blast
Furnace Process, by H. Brauer, R. Jeschar,
(pp 9-16).

*BISI 3537

Special Etching Processes for Steels, With
Some Examples, by J. Brauner, (pp 173-179).

*BISI 3547

A Hot-Stage Microscope for Large Sheet
Specimens and Its Application to Certain
Questions of Grain Growth, by K. H. Schmidt,
H. Huss, (pp 831-837).

*BISI 3565

Optical Microscopical Investigation of Martensitic
Structures, by W. Pepperhoff, H. E. Buhler,
(pp 839-843).

*BISI 3566

Scientific
Engineering (Contd)

The Behaviour of Orc Pellets During the Pyro-Process
in a Rotary Kiln With Grate Preheater, by H. Anna.
GERMAN, per, Aufbereitungs-Technik, No 9, 1963,
pp 363-380.

*BISI 3543

Elastic Analysis of Prestressed Flanged Pipelines
by Means of Electronic Computers, by J. Hoppe.
GERMAN, per, Brennstoff-Wärme-Kraft, Vol XV, No 7,
1963, pp 331-337.

*BISI 3518

Measurement of the Doppler Frequency of a
Single Radar Echo Pulse. Investigation of the
Influence of Disturbances on the Measuring
Accuracy, by K. Besemar, W. Fogy.
GERMAN, per, Deutsche Versuchsanstalt fuer
Luftfahrt Rep., No 149, Feb 1961, 42 pp.

TIL T-5376

Trouble-Free Measurement of the Depth of
Carburizing Hardening With the Two Step Depth
of Impression Process, by E. Just.
GERMAN, per, Harterei-Technische Mitteilungen,
Vol XVII, Oct 1962, pp 148-159.

*BISI 3535

Low Temperature Steels and Their Weldability, by
D. Schulten.
GERMAN, per, Industrieblatt, Vol IV, Apr 1963,
pp 209-215.

*BISI 3532

A Fully Automatic Testing Device for the
Determination of the Thermal Fatigue
Strength of High-Temperature Materials, by
E. Krempl.
GERMAN, per, Materialprüfung, Vol V, Apr 1963,
pp 144-153.

*BISI 3542

Mathematical Statistics Used in Evaluating
Optimum Quantities Affecting the Output of
Open Hearth Furnaces - II, by H. Müller, K. Kohler.
GERMAN, per, Neue Hütte, Vol VIII, No 3, 1963,
pp 160-171.

*BISI 3570

Possibilities and Limits of Influencing
Desulphurisation When Melting Soft Steels in
the Open-Hearth Furnace, by H. John, W. Gurlich.
GERMAN, per, Neue Hütte, Vol VIII, No 11, 1963,
pp 650-654.

*BISI 3550

Scientific
Engineering (Contd)

Selected Articles From the German Periodical
Stahl und Eisen.

Vol LXXXII, 1962, pp 1149-1155. HB 5696
Present State of Automation in Blast Furnace
and Steelmaking Plants, by W. Liesegang.

Vol LXXXIII, 1963. BISI 3301
Design of a Programmed Blooming Train With
Automatic Material Flow. I- Design and
Operation of the Rolling Mill, by H. Hye,
S. Fegerl, (pp 489-495).

Investigation on the Statistical Laws for
Spindle Torques and Housing Loads in a
Blooming Mill Train, by F. W. Griese,
W. Schweer, (pp 715-723). *BISI 3557

Problems Concerning Dust Removal in Flue
Gases From Arc Furnaces, by W. Muhlrad,
(pp 921-929). BISI 3446

The New Basic Oxygen Steel Plant of
August-Thyssen-Huxter, by K. Behrens,
R. von Moos, (pp 1025-1034). HB 6039

Effect of Hot Blast Temperatures on the
Operating Results of the Blast Furnace, by
W. Zischkale, G. Heynert, (pp 1117-1125). *BISI 3560

Temperature Measurement and Heat
Distribution During Heat-Treatment in an
Electrically Heated Experimental Furnace,
by K. Schveyher, (pp 1162-1169). *BISI 3564

Electric Hot-Topping of Cast Slabs of Uncapped
Carbon Steel, by H. J. Kirschning, (pp 1433-1440). *BISI 3552

Automation of Blast Furnace Operation, by
H. P. Schulz, (pp 1501-1506). *BISI 3553

Investigation of the Pressure in the Burden
Column of the Blast Furnace, by M. Hansen,
(pp 1506-1508). *BISI 3554

Injection of Heavy Oil With High Blast Temperature,
Fully Prepared Burden and Oxygen Enrichment of
Blast, by H. T. Brandi, P. Ischebeck, (pp 1541-1546). *BISI 3558

Scientific
Engineering (Contd)

Selected Articles From the German Periodical
Stahl und Eisen. (Contd)

Vol LXXXIII, 1963.

Types of Tools for Forging Difficultly Workable
Steels, by M. Kroneis, T. Skamletz, (pp 1546-1553)

*BISI 3551

The Power and Work Requirements of a Continuous
Light Section Train, by W. Schwenzfeier,
O. Pawelski, (pp 1553-1561).

*BISI 3533

Rolling of Stainless Steel Strip and Sheet, by
G. Momms.

GERMAN, per, Technische Mitteilungen Krupp, Vol XXI,
Mar 1963, pp 1-10.

*BISI 3540

Residual Stresses in Alloy Tool Steels, by H. Buhler,
E. Herrmann.

GERMAN, per, Verein Deutscher Ingenieure Zeitschrift,
Vol CIII, Sep 1961, pp 1229-1234.

BISI 3488

Weatherproof Cellophane -- Production, Characteristics
and Use, by W. Breitmoser, P. Bunge, 5 pp.
GERMAN, per, Die Verpackung, No 4, Jul, Aug 1963,
pp 23-25.

ACSI I-3531
ID 2246318
519th MI Bn

Corrosion and Passivity, by U. F. Franck, 15 pp.
GERMAN, per, Werkstoffe und Korrosion, Vol IX, No 8, 9,
1958, pp 504-513. 9215991

ACSI Tr 1249

Potentiostatic Differential Etching of Structural
Components in 18/8 CR:NI Steels, by B. Roschenblech,
E. K. Buss.
GERMAN, per, Werkstoffe und Korrosion, Vol XIV, No 4,
1963, pp 261-269.

*BISI 3546

Stress Corrosion Cracking of Iron Alloys, Especially
Austenitic Stainless Steel, by H. Ternes.
GERMAN, per, Werkstoffe und Korrosion, Vol XIV,
Sep 1963, pp 729-739.

*BISI 3541

Process for the Manufacture of Synthetic Bristles, by
Johann Otto Zentgraf, 5 pp.
GERMAN, Patent No 906,444.

Patent Office

Electromagnetic Four Terminal System Adapted for
Insertion in a Telephone Receiver, 12 pp.
GERMAN, Patent No 1,052,458.

Patent Office

Scientific
Engineering (Contd)

New Rolling Mill for Light Profiles of the Terni Society, by R. Natini, M. Esposito.
ITALIAN, per, Metallurgia Italiana Atti Notizie, No 9, 1963, pp 251-263.

*BISI 3568

Instrument for Executing Geometric Drawings and the Like, by Aurelio Velo, 6 pp.
ITALIAN, Patent No 268,259.

Patent Office

Geological Structure of the Ryukyu Arc, by Koto Bunjiro.
JAPANESE, per, Chishitsugaku Zasshi, Vol V, No 49, 1897, pp 1-12.

Dept of Interior
209(900) qUn33pr
No 375

A Simplified Method of Obtaining Highest-System Reliability, by M. Sasaki.
JAPANESE, per, Journal of the Institute of Electrical Communications and Engineering, No 45, 1962, pp 144-150.

*AEC

A Method of Finding the Characteristics of Hydrofoil With a Finite Span, by Tetsuo Nishiyama, 10 pp.
JAPANESE, per, Journal of the Society of Naval Architects of Japan, Vol C-Cl of 1957, Oct 1963.

Navy Tr 3679
BuShips 833

Optimum Flow Pattern Around a Hydrofoil of Finite Span, by Tetsuo Nishiyama, 10 pp.
JAPANESE, per, Journal of the Society of Naval Architects of Japan, Vol C-Cl of 1957, Oct 1963.

Navy Tr 3680
BuShips 834

Oceanographic Survey Ship Tansei Maru, by Atsushi Takagi, 12 pp.
JAPANESE, per, Science of Ships, Vol XVI, No 10, 1963, Enc1 to USNA, Tokyo.

Navy 5852100563

Automatic Electric Regulator for Electric Machines, by Robert Bosch, 8 pp.
SWISS, Patent No 93,102.

Patent Office

Packaging of Natural Sponges, by Schwamm, 5 pp.
SWISS, Patent No 183,570.

Patent Office

Granulator, by Buss, 6 pp.
SWISS, Patent No 314,725.

Patent Office

Scientific
Fuels & Propulsion

Tests of N.S 9250 Oils B.P. 60, and Texaco 1883
on Motors G.M.C. 3/71, and Petter, 39 pp.
FRENCH, rpt, Essais sur Moteurs G.M.C. 3/71 et
Petter des Huiles N.S. 9250 BO 60, Texaco 1883,
May 1963.

Navy Tr 3673
BuShips 815

Improvements to Fuel Elements, by M. Gauthron,
M. Salesse, et al.
FRENCH, Patent No 1,323,725, 1963.

*AERE-Marwell

Materials & Metallurgy

Chinese-English Glossary of Mineral Names, by
J.E.S. Bradley, A. C. Barnes.
RUSSIAN, bk.

CB

Electromagnetic Method of Weld Inspection, by
B. G. Kolenda.
RUSSIAN, bk, Elektromagnitnyy Metod Kontrolya
Svarnykh Shvov, Chap 1, 2, 1959, pp 3-29.

*BISI 3522

Intricate Investment Casting, by V. M. Korolev,
V. M. Stepanov, 178 pp.
RUSSIAN, bk, Fasonnoye Lit'ye po Vyplavlyayemym
Modelyam, Moscow, 1962, pp 1-158.

JPRS 22509

Self-Diffusion of Mo in Mo-Zr Alloys, by
M. B. Bronfin, S. Z. Bokshteyn.
RUSSIAN, bk, Issledovaniya Splavov Tsvetnykh Mettallov,
No 3, 1962, pp 12-18.

*FTD-TT-63-1203

Selected Articles From the Russian Book
Issledovaniye Splavov Tsvetnykh Mettallov, No 4,
1963.

Alloys of Plutonium, by S. T. Konobeyevskiy,
V. I. Kutaytsev, 11 pp, (pp 17-24).

JPRS 22599

Investigation of the Ternary Systems Niobium Tungsten
Zirconium and Niobium Molybdenum Zirconium, by
Ye. M. Savitskiy, A. M. Zakharov, 12 pp, (pp 108-116).

JPRS 22593

Carbide Hard Alloys -- The Most Important Product
of Powder Metallurgy, by G. A. Meyerson, 19 pp,
(pp 266-278).

JPRS 22600

Scientific
Materials & Metallurgy (Contd)

Selected Articles From the Russian Book
Khimiya i Khimicheskaya Tekhnologiya Silikatnykh
Materialov, No 82, 1960. 9690465

FTD-TT-63-688

Factory Testing of an Experimental Sagger Body,
by P. F. Mikhalevich, N. K. Yagovdik, et al, 10 pp.

The Effect of Temperature and Rarefaction on
Evaporation During Casting and on the Properties
of a Ceramic Cast, by I. I. Kisel', I. M. Rybakov,
8 pp.

The Effect of Aging and Frost Exposure on the
Characteristics of Bodies and Finished Products,
by I. I. Kisel', K. I. Chekmareva, 8 pp.

The Effect of Additions of Cement, Gypsum, and Ash
on the Physicomechanical Properties and the Drying
Rate of Ceramic Bodies, by I. I. Kisel',
V. V. Radkevich, 12 pp.

The Effect of Individual Components and Certain
Additives on the Process of Imparting a Ruby Color
in Glass, by G. A. Kovtunenko, 6 pp.

The Graphic Method of Converting the Composition of
Glass From Weight Percents to Molar Percents and
From Molar Percents to Weight Percents, by
N. N. Yermolenko, L. N. Lambin, 8 pp.

Use of the MF-4 Microphotometer as a Radiation Receiver
in Spectral Analyses, by A. N. Kripskiy, 9 pp.

The Possibility of Obtaining Porous Materials From
Various Belorussian Clays, by P. F. Mikhalevich,
N. K. Yagovdik, 17 pp.

The Study of Crystallization in Glasses Obtained From
Low-Melting Clays, by V. N. Sharay, 12 pp.

Elaboration of Compositions of Lead-Free Crystal, by
L. A. Zhunina, N. N. Yermolenko, 8 pp.

Use of Low-Melting Clay in the Production of Containerware,
by L. A. Zhunina, Ye. I. Mikhlyukov, 14 pp.

Scientific
Materials & Metallurgy (Contd)

Soviet Research in Production and Physical Metallurgy
of Pure Metals, by V. S. Yemel'yanov, A. I. Yevstyukhin,
et al, 162 pp.

RUSSIAN, bk, Metallurgiya i Metalloved Chistykh Metallov,
31 May 1963, pp 5-10; 18-33; 47-63; 69-109; 122-148;
160-181; 228-242.

JPRS 22697

The Strength and Super Strength of Metals, by
M. Kh. Rabinovich, 175 pp.

RUSSIAN, monograph, Prochnost' i Sverkhprochnost'
Metalov, Moscow, 1963, pp 198-.

JPRS 22445

Titanium Alloy Sheet Stamping, by Yu. P. Davydov,
G. V. Pokrovskiy, 86 pp.
RUSSIAN, bk, Tekh Listovoy Shtampovki Titanovykh
Spalov, Moscow, 1963, pp 1-71.

JPRS 22746

Minerals of the Rhabdophane Group in Alkalic
Massives, by E. I. Semenov, 22 pp.
RUSSIAN, per, Ak Nauch SSSR, Koi'skiy Filial,
Materialy po Mineralogii Koi'skogo Poluostrova,
Vol I, 1959, pp 91-101.

Dept of Interior
103(570) M418E

Selected Articles From the Russian Periodical
Avtomat Svarka.

No 8, 1963, pp 83-86.

Spot Welding of Sintered Aluminum Powder With
D16AT and AMg6 Alloys, by G. F. Skakun,
A. A. Chakalev, 7 pp.

JPRS 22422

No 10, 1963.

Submerged-Arc Welding of OT4 Titanium-Alloy
Parts, by V. B. Volkov, Ye. O. Paton, 7 pp,
(pp 33-36).

JPRS 22492

Electroslag Melting of Titanium-Alloy Ingots, by
S. M. Gurevich, V. P. Didkovskiy, et al, 9 pp,
(pp 37-42).

Joining Titanium by Vacuum-Diffusion Welding, by
N. F. Kuzakov, A. P. Shishkova, et al, 8 pp,
(pp 82-86).

Effect of High Pressure on Thermal Properties of
a Solid Body, by K. P. Rodyonov, 9 pp.
RUSSIAN, per, Fiz Metal i Metallov, Vol III, 1956,
pp 26-30. 9216845

AEC-UCRL-Tr-997(L)

Scientific
Materials & Metallurgy (Contd)

Investigation of the Effect of a Liquid Phase on the Movement of the Gas Stream in a Cold Model of a Blast Furnace, by Wang Te-jung, L. M. Tsvilev.
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Metal i Toplivo, No 4, 1961, pp 12-17.

HB 6034

Selected Articles From the Russian Periodical Iz Vysshikh Ucheb Zaved, Chern Metall,

No 12, 1959, pp 13-30.
Reduction in Primary Slag Formation in Blast-Furnace Operation on Fluxed Sinter, by Yu. M. Potebnya.

HB 4867

No 8, 1960, pp 15-21. 9216580
The Surface Properties of Iron-Carbon Alloys, by B. V. Tsarevskiy, S. I. Popel', 10 pp.

NASA TT F-149

No 1, 1962, pp 124-130. 9217182
Electrotransfer Migration of Thallium and Cobalt Admixtures in Liquid Metallic Solutions, by D. K. Belashchenko, G. A. Grigoriyev, 11 pp.

AEC-Tr-6077

No 5, 1962, pp 120-130. 9217211
Electromigration in Liquid Binary Alloys and Its Connection With Electroresistance, by D. K. Belashchenko, 15 pp.

AEC-Tr-6076

No 7, 1962, pp 137-139. 9217194
Electrotransfer Migration of Nickel Admixtures in Smelts Molten Metals, by G. A. Grigoriyev, D. K. Belashchenko, 5 pp.

AEC-Tr-6078

No 9, 1962, pp 99-104.
Effect of Oxygen on Desulphurization of Liquid Steel, by A. I. Kondrat'yev, A. M. Samarin.

BISI 3441

No 10, 1962, pp 166-170.
Injection of Compressed Air or Oxygen Into the Open-Hearth Bath for Automatic Control of the Carbon Elimination Process, by M. Ya. Medzhibozhskiy.

HB 5783

No 1, 1963, pp 111-116.
Microdefects in Diffusion Layers on Alloys of Iron, by M. A. Krishtal.

HB 5912

Scientific
Materials & Metallurgy (Contd)

Selected Articles From the Russian Periodical
Iz Vysshikh Ucheb Zaved, Chern Metall. (Contd)

No 8, 1963, pp 72-81.

Investigation of Stresses When Pushing a Tube
Through a Draw Plate, by V. V. Shreykin,
V. B. Slavin, 14 pp.

JPRS 22441

No 9, 1963, pp 62-69.

Primary Structure of Continuously Cast Rimmed-
Steel Billets, by V. B. Gankin, et al.

HB 6105

Residual Stresses in the Metallic Surface
Impregnation of 1.0% C Tool Steel, by G. N. Dubinin.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Mashinostroy,
No 10, 1962, pp 178-183.

HB 5923

Ore Deposits in East Kazakhstan, by N. Sergeyev, 6 pp.
RUSSIAN, np, Kazakh Pravda, 17 Nov 1963, p 2.

JPRS 22676

Spodumene Pegmatites in Krivoy Rog, by V. G. Kushev.
RUSSIAN, per, Mineralog Shornik L'vov Geol Obshch,
No 14, 1960, pp 357-362.

Dept of Interior
G(578)L97msE No 14

Mineral Wealth of Dzhezkazgan is Slowly Exploited,
by A. Shamel'khanov, 7 pp.
RUSSIAN, per, Narod Khoz Kazakh, No 9, 1963,
pp 26-28.

JPRS 22676

Tests Conducted for the Purpose of Increasing
the Resistance to Thermal Shock of Runner Bricks,
by I. A. Ol'khovskiy, I. Sh. Shvartsman.
RUSSIAN, per, Ogneupory, Vol XXIII, No 11, 1958,
pp 498-504.

BISI 3530

Reaction of Molybdenum With Titanium Carbide, by
V. N. Yeremenko, T. Ya. Velikanova, 9 pp.
RUSSIAN, per, Poroshkovaya Metallurgiya, No 5,
Sep, Oct 1963, pp 3-9.

JPRS 22655

Wettability of NbC-VC and NbC-TiC Alloys With
Nickel, by V. I. Tumanov, V. F. Funke, et al, 5 pp.
RUSSIAN, per, Poroshkovaya Metallurgiya, No 5,
Sep, Oct 1963, pp 43-46.

JPRS 22655

Nitriding Aluminum Powder and Dust to Produce
Aluminum Nitride, by Yu. D. Repkin, G. V. Samsonov,
11 pp.
RUSSIAN, per, Poroshkovaya Metallurgiya, No 5,
Sep, Oct 1963, pp 68-76.

JPRS 22655

Scientific
Materials & Metallurgy (Contd)

On the Subject of Prospects for the Development of
Continuous Teeming of Steel, by B. V. Fitilev,
S. V. Gubert, et al, 8 pp.
RUSSIAN, per, Stal, No 10, 1963, pp 889-892.

JPRS 22594

Production of Large Size Pipes Made of Okhlonzot2
Stainless Steel, by O. A. Piyatskovskiy,
G. I. Volkovitskiy, et al, 14 pp.
RUSSIAN, per, Stal', No 11, 1963, pp 1024-1027.

JPRS 22444

Some Features of Welding Niobium and Its Alloys, by
D. S. Balkovets, L. N. Kaganov, 10 pp.
RUSSIAN, per, Svaroch Proiz, No 10, 1963, pp 10-12.

JPRS 22597

On the Special Features in the Electron Spectrum of
Superconducting Compounds, by I. V. Borovskiy, 12 pp.
RUSSIAN, per, Trudy Inst Metall imeni A. A. Baykova,
Metallurg, Metallov, Fiz-Khim Metody Issledov,
No 15, 1963, pp 79-87.

JPRS 22588

The Outlook for Industrial Recovery of Selenium
and Tellurium From Products of the Treatment of
Copper-Molybdenum Ores, by V. N. Leksin.
RUSSIAN, per, Trudy Inst Mineralog, Geokhim i
Kristallokhim Redkikh Elementov, Vol IV, 1960,
pp 235-245.

Dept of Interior
G(570) Acl22m22E

Effect of Oxygen on the Properties and Heat Treatment
of Titanium Alloy VT14, by A. I. Khorev, V. N. Moiseyev,
et al, 9 pp.
RUSSIAN, per, Tsvetnyye Metally, No 11, 1963, pp 69-74.

JPRS 22595

Selected Articles From the Russian Periodical
Zavod Lab, Vol XXIX, 1963.

JPRS 22471

No 8, pp 944-948.
Direct Observation of the Interaction of Dislocations
With Second Phase Particles, by M. P. Usikov,
L. M. Utevskiy, 8 pp.

No 10.
The Ultrasonic Detection of Fatigue Cracks in Static
Pulsation Tests, by Ya. A. Rublev, Yu. S. Danilov,
(pp 1188-1191).

HB 6127

Presentation of Results of Investigations of the
Structural Defects of Germanium, by V. N. Maslov,
L. V. Nabotova, et al, 10 pp, (pp 1206-1211).

JPRS 22442

Scientific
Materials & Metallurgy (Contd)

Selected Articles From the Russian Periodical
Zavod Lab, Vol XXIX, 1963. (Contd)

No 11. Spectrographic Analysis of Carbon in Carburized Steels, by T. T. Stefanenko, (pp 1321, 1322). HB 6064

Testing for Relaxation Under High Stresses, by L. V. Getsov, (pp 1352-1354). HB 5723

Current Review of Instantaneously High Temperature Resisting Plastics, by Ch'i Wen-shih, 25 pp. CHINESE, per, Hua-hsueh T'ung-pao, No 2, 1963, pp 26-33. JPRS 22529

Optical Properties of Oxidized Compounds of the Rare Earth Metals in Inorganic Glass, by Kan Fu-hsi, Chiang Chung-hung, 10 pp. CHINESE, per, K'o-hsueh T'ung-pao, No 9, 1963, pp 50-52. JPRS 22766

Physical and Chemical Character of Formosan Coal, by Tsang Po Yen. CHINESE, per, Taiwan Mining Industry, Vol II, No 2, 1950. Dept of Interior 209(900) qUn33pr No 331

Corrosion Study XVI - Effect of Rate of Penetration of Water Vapor by Oil Film in Corrosion of Steel Protected by Oil Layers, by Robert Bartonicek, 6 pp. CZECH, per, Chemicke Listy, Vol LII, 1958, pp 190-195. ACSI I-2392-A ID 2229434

Corrosion Study XVII - Effect of Hydrogen Sulfide on Corrosion of Aluminum, by Karel Smrcek, Ivan Sekerka, 6 pp. CZECH, per, Chemicke Listy, Vol LII, 1958, pp 196-200. ACSI I-2392-B ID 2229434

Aluminum Coatings as a Protection Against the Effects of High Temperatures, by A. Hrbcek. CZECH, per, Hutnik, Vol XIII, No 9, 1963, pp 435-438. HB 6140

A Method of Non-Destructive Measurement of Carburised Wire Thickness, by L. Duben. CZECH, per, Materialovy Shornik, Vol I, 1961, pp 61-72. *BISI 3548

New Method of Revealing Surface Defects, by M. Tryta. CZECH, per, Materialovy Shornik, Vol III, 1961, pp 69-72. *BISI 3549

A Contribution to the Theory of Metal Friction, by E. Navara, 6 pp. CZECH, per, Technicke Zpravy VJPM, No 4, 1962, pp 15-20. JPRS 22429

Scientific
Materials & Metallurgy (Contd)

Continuous Determination of Alkylarylsulphonates,
by O. Ruzicka, O. Vilim, 11 pp.
CZECH, per, Vodni Hospodarstvi, Vol X, No 8, 1960,
pp 348-349. 9216788

AEC-NP-Tr-1073

On the Composition and Structure of Pyrrhotite,
by Olavi Kuovo, Y. Vuorelainen.
FINNISH, per, Geologi, No 6, 1962.

Dept of Interior
G(579) H36g

Thermal Flux in Shields of Graphite, Iron, Concrete,
Iron-Concrete, C-Concrete, by M. Hot, J. P. Millot,
et al, 15 pp.
FRENCH, rpt, Jan 1960. 9217236

AEC-Tr-6044

Calculation and Measurement of Heat Liberated by
Radiation in Installed Non-Fissile Materials, by
E. Kmiotek, G. Manent, 14 pp.
FRENCH, rpt, Jun 1961. 9217191

AEC-Tr-6091

Studies of Mock-Ups: Uranium, Stainless Steel,
Water, by P. Pepin, C. Goulet, et al, 5 pp.
FRENCH, rpt, Jan 1962. 9216851

AEC-Tr-6056

Application of the Two-Group Theory to the Calculations
of Graphite, Boron-Graphite and Iron Mock-Ups in
Naiade, by M. Hot, A. Mourgues, 24 pp.
FRENCH, rpt, 31 Jan 1962. 9216112

AEC-Tr-6062

Compatibility of Various Austenitic Steels With
Melted Sodium, by L. Champeix, J. Sannier, et al.
FRENCH, rpt, 30 Sep-2 Oct 1963.

*AEC

Study of Those Factors Influencing Corrosion of
Aluminum in a Nuclear Reactor, by P. Renders,
G. Spaepen.
FRENCH, rpt, Etude de Quelques Facteurs Influencant
la Corrosion de l'Aluminium dans un Reacteur
Nucleaire, Brussels, 4-6 Jun 1963.

*AEC

Method of Preparing Tritiated Benzene for Scintillation
Measurement of Low-Level Tritium Contents in Hydrology,
by L. Pichat, D. Sharefkin, et al, 10 pp.
FRENCH, rpt, Methode de Preparation de Benzene Tritie
pour la Measure par Scintillation en Hydrologie de
Faibles Teneurs en Tritium, 1962. 9216857

AEC-HW-Tr-60

The Behaviour of Oxygen in the LD Converter, by
J. E. de Graaf.
FRENCH, rpt, Paper Presented at the International
Congress on Oxygen Steel Plants at Le Touquet and
Dunkirk, 23-26 Sep 1963.

BISI 3478

Scientific
Materials & Metallurgy (Contd)

Use of Poor-Coking Coals in the Iron and Steel Industry, by R. Loison.

FRENCH, rpt, Paper Presented at the International Regional Symposium on the Application of Modern Technical Practices in the Iron and Steel Industry in Developing Countries, Prague, Geneva, Nov 1963.

BISI 3521

Study of the Oxidation of Carbons by Air and Carbon Dioxide as a Function of Their Structure and Their State of Purity, by F. M. Lang, P. Magnier, et al, 49 pp.

FRENCH, rpt, Proceedings of the Fifth Conference on Carbon, Vol I, 1962, pp 171-193. 9216854

AEC-HW-Tr-54

Realization of a Reduction Process, Chain of Reduction for Plutonium on an Industrial Scale at the Marcoule Center, by J. Kerjean, 7 pp.

FRENCH, rpt, Proceedings of the Second International Conference on Plutonium Metallurgy, 19-22 Apr 1960, pp 186-192. 9216055

AEC-Tr-6012

Study of the Surface Tension of a Grain Boundary in a Metal as a Function of the Orientation of the Two Grains Which the Boundary Separates, by J. Friedel, B. D. Cullity.

FRENCH, per, Acta Metallurgica, Vol I, Jan 1953, pp 79-92.

BISI 3509

Electronic Weighing on Casting Crane, by R. Duchateau. FRENCH, per, Centre de Documentation Siderurgique Circulaire, Vol XX, No 10, 1963, pp 2223, 2224.

*BISI 3561

Electronic Weighing of Scrap and Solid Pig Iron, by C. Galloy, R. Bur.

FRENCH, per, Centre de Documentation Siderurgique Circulaire, Vol XX, No 10, 1963, pp 2231-2236.

*BISI 3562

Hydrates of Uranic Anhydride and Heat of Formation of Uranyl Nitrate, by R. de Forcrand.

FRENCH, per, Comptes Rendus, Vol CLVI, 1963, pp 1954-1958.

*AEC

Diffusion of Plutonium and Uranium in Magnesium, by D. Calais, M. Beyeler, et al, 6 pp.

FRENCH, per, Comptes Rendus, Vol CCLVII, 1963, pp 1285-1287. 9216099

AEC-HW-Tr-61

Extraction of Plutonium, by M. Alles.

FRENCH, per, Energie Nucleaire, No 5, 1963, pp 263-270.

*AEC

Scientific
Materials & Metallurgy (Contd)

A Contribution to the Study of the Structure
of the Brittle Fracture of Mild Steel, by
J. B. Lean, J. Piatou.

FRENCH, per, Memoires Les Scientific de la Revue
Metallurgie, Vol LVI, Sep 1959, pp 427-452.

ACSL Tr 1337

Progress in Handling Mechanisms in Medium and Large
Iron-Works, by A. Mercier.

FRENCH, per, Metallurgie et Construction Mecanique,
1962, pp 1109-1123.

*BISI 3555

Brittle Fracture of Steel, by J. B. Lean, 17 pp.
FRENCH, per, Metaux, No 401, Jan 1959, pp 1-19.
9215988

ACSL Tr 1332

Production of Carbon Steel by the Olp Process, by
P. Cesselin, J. M. Kindelan, et al.
FRENCH, per, Revue de Metallurgie, Vol LX, 1963,
pp 237-249.

BISI 3457

Very High Strength Constructional Steels, by
L. Habraken.
FRENCH, per, Revue de Metallurgie, Vol LX, No 5,
1963, pp 439-456.

BISI 3396

Nozzle for Vacuum Casting of Steel, by
J. Chedaille, M. Sivet, et al.
FRENCH, per, Revue de Metallurgie, Vol LX, 1963,
pp 663-668.

BISI 3458

Desulphurization in the Basic Convertor, by
J. Wampach, A. Decker.
FRENCH, per, Revue Universelles des Mines, Vol XI,
1955, pp 68-75.

BISI 3504

Improvements in the Thermal Treatment of Pieces
of Units, by F. S. Deneen, W. C. Dunn, 5 pp.
FRENCH, Patent No 814,759, 1937.

OTS 62-18558

Process for the Manufacture of Nuclear Fuel
Materials and Products, and the Materials and
Products Obtained by Means of This Process, by
P. Galmiche, A. Hivert.
FRENCH, Patent No 1,198,870, 1959.

*AERE-Marwell

Process for Preparing an Iron-Aluminium Alloy, by
G. Carane, P. Mouturat, et al.
FRENCH, Patent No 1,323,724, 1963.

*AERE-Marwell

Radiation Effects on Noble Metals, by B. Dobratz.
GERMAN, rpt, 1958.

*AEC

Scientific
Materials & Metallurgy (Contd)

Metallurgical Investigations at the August-Thyssen
Oxygen Steelmaking Plant, by K. Behrens, T. Kootz.
GERMAN, rpt, Paper Presented at the International
Congress on Oxygen Steel Plants at Le Touquet and
Dunkirk, 23-26 Sep 1963.

BISI 3472

Behavior of the 0.2 - Limit With Welding Connections
of Aluminum Alloys, by G. Jacoby, H. Schoer, 23 pp.
GERMAN, per, Aluminium, Vol III, 1963, pp 159-164.
9690553

DDC RSIC-103

Heats of Formation of Alpha-and Gamma-Iron-Cobalt
Alloys, by W. Steiner, O. Krisement,
GERMAN, per, Archiv fuer das Eisenhuttenwesen,
Vol XXXIII, 1962, pp 877-881.

BISI 3180

Analysis of OH Steelmaking Slags During the Heats,
Using an Automatic X-Ray Flourescence Spectrometer,
by P. Dickens, P. Konig.
GERMAN, per, Archiv fuer das Eisenhuttenwesen,
Vol XXXIV, No 7, 1963, pp 519-525.

HB 6067

Experiments and Evaluation of the Life of Ingot
Moulds, by H. Trenkler, K. Czech.
GERMAN, per, Berg-und Huttenmannische Monatshefte,
Vol CVII, 1962, pp 335-341.

BISI 3329

Experiences in the Injection of Natural Gas Into
the Blast Furnace, by N. Sjogren, W. Pickler.
GERMAN, per, Berg-und Huttenmannische Monatshefte,
Vol CVII, No 12, 1962, pp 377-382.

HB 5809

On the Influence of the Coking of Technically Inert
Substances of Variable Particle Size and Variable
Specific Surface Area on the Plastic Behaviour of
a Coking Coal, by H. Pichler, K. H. Lauer.
GERMAN, per, Brennstoff-Chemie, Vol XLIV, No 5, 1963,
pp 149-154.

BISI 3423

An Improved Free-Cutting Stainless Steel With Added
Sulphur and Aluminium, by R. Oppenheim, N. Jansen.
GERMAN, per, DEW-Technische Berichte, Vol III, No 2,
1963, pp 58-62.

BISI 3438

The Technical Manufacture of Calcium Metal. I.
Electrolytic Processes, by G. Wehner.
GERMAN, per, Freiberger Forschungshefte, Vol XVII,
1956, pp 18-33.

*AERE-Harwell

Scientific
Materials & Metallurgy (Contd)

Protection of Metal Recuperators From Overheating,
by S. Hartel.
GERMAN, per, Gaswärme, Vol V, 1956, pp 8-13.

*BISI 3563

Wasters in the Chill Casting of Gray Iron: Their
Causes and Measures for Their Prevention, by
K. Herfurth.
GERMAN, per, Giessereitechnik, Vol VI, No 11, 1960,
pp 331-338.

HB 5350

The Vacuum Melting of Cast Iron and the Change in
the Inoculating Effect, by A. J. Zuithoff,
R. A. Kortmulder.
GERMAN, per, Giesserei, Technisch-Wissenschaftliche
Beihefte, Vol XIV, 1962, pp 135-139.

HB 6132

Choice and Heat-Treatment of Steel for Hot and
Cold-Forming, by E. Zmihorski.
GERMAN, per, Harterei-Technische Mitteilungen,
Vol LX, Part B, NOV 1960, pp 89-93.

BISI 3469

The Continuous Casting of Steel: Principles,
Development, Present State of Knowledge, and
Application, by B. Tarmann.
GERMAN, per, Harterei-Technische Mitteilungen,
Vol XVII, 1962, pp 29-38.

BISI 3384

Nomographic Determination of Permissible Distances
and Protective Screens Against Gamma Radiation, by
Frantisek Khol, 6 pp.
GERMAN, per, Jaderna Energie, Vol VIII, No 6, 1962,
pp 205-207.

ABC-Tr-6101

On the Production of Raw Steel From Fine Ore in the
Liquid Phase, by R. Rummel.
GERMAN, per, Klempig Fachberichte, Vol LXX, Apr 1962,
pp 133-138.

*BISI 3545

High Frequency Coking of Bituminous Coal, by
M. Engshuber.
GERMAN, per, Mitteilungen Institut Energetik,
Vol XXXIV, 1961, pp 206-209.

*BISI 3528

The Effect of Cold Deformation and Tempering on
the Size, Shape and Orientation of Martensite in
Fe-Ni-Cr Alloys, by G. Rassmann, O. Henkel.
GERMAN, per, Neue Hütte, Vol VIII, 1963, pp 232-240.

BISI 3328

Scientific
Materials & Metallurgy (Contd)

Oxide Inclusions in Electron-Beam Remelted Steels,
by R. Bernst.
GERMAN, per, Neue Huette, Vol VIII, No 6, 1963,
pp 330-332.

IIB 6006

Promising Development Work on Steelmaking in
1962, by W. Kuntscher, R. Peters.
GERMAN, per, Neue Huette, Vol VIII, No 6, 1963,
pp 333-339.

IIB 6008

Influence of Deoxidation on Surface Defects in
Medium Hard Basic Bessemer Steels, by E. Zimmermann.
GERMAN, per, Radex Rundschau, No 6, 1963, pp 635-646.

*BISI 3572

Selected Articles From the German Periodical
Stahl und Eisen.

Vol LXXXII, 1962.

Critical Assessment of the Trends in the Automation
of Steel Plants, by O. Martin, (pp 1372-1375).

HB 5722

The Influence of Hot Dip Galvanizing on the
Fatigue Characteristics of Cold-Rolled Sheet,
Part II, by M. Hempel, D. Horstmann, (pp 1775-1781).

HB 6078

Vol LXXXIII, 1963.

On the Electric Arc Furnace, With Special Reference
to Large Capacity Units for Steel Production,
Part I, by F. Harms, (pp 257-265).

HB 5900

The Cooling Capacity of Various Additions and
Effect on Charge Conditions and Costs When Refining
Steel With Oxygen, Part II, by K. G. Speith,
H. vom Ende, (pp 969-971).

HB 6079

Comparison of the Results of Testings of the
Cutting Property and Those of Structure and
Strength Testings of Case-Hardening and Heat
Treatable Steel, (pp 1209-1226).

*BISI 3523

The Future Prospects of Minette Ore, by H. Malcor,
(pp 1277-1286).

RISI 3506

Comparison of the Results of Testings of the Cutting
Property and Those of Structure and Strength Testings
of Case-Hardening and Heat Treatable Steel Part II,
(pp 1302-1315).

*BISI 3524

Scientific
Materials & Metallurgy (Contd)

Selected Articles From the German Periodical
Stahl und Eisen. (Contd)

Vol LXXXIII, 1963.
Development of the Pelletization of Iron Ores
and the Production of Mixed-Ore Pellets, by
K. Meyer, (pp 1337-1348). HB 6092

Contribution to the Solution of the Problem
of Off-Lengths With Semifinished Products, by
K. H. Monmertz, (pp 1561-1565). *BISI 3534

Method to Improve the Mechanical Properties of
Martensite - Containing Austenitic Manganese Steels,
by H. Schumann.
GERMAN, per, Technik, Vol XVIII, 1963, pp 469-473. *BISI 3569

The Use of Commercially Pure Oxygen in Steelmaking,
Part II, by W. Hess.
GERMAN, per, Technische Mitteilungen Krupp,
Werkberichte, Vol XX, No 5, 1962, pp 267-272. HB 6125

On the Importance of Gases in Iron and Steels
and Methods for Their Determination, by P. Dickens.
GERMAN, per, Z fuer Analytische Chemie, Vol CXCII,
1963, pp 65-81. BISI 3495

Practical Applications of Electrostatic Dressing
and Separation, by Alfred Stieler, 24 pp.
GERMAN, per, Z fuer Erzbergbau und Metallhuttenwesen,
Vol VIII, 1955, pp 127-136. SIA 63-16134

Strength and Ductility of Metals to Subzero Temperatures,
by A. Kochendorfer,
GERMAN, per, Z fuer Metallkunde, Vol LI, No 2, 1960,
pp 73-80. HB 5184

The Spreading of Liquid Metals on the Surface of
Solid Metals, by T. Neumann, K. Forch.
GERMAN, per, Z fuer Metallkunde, Vol LIII, 1962,
pp 122-130. *AEC

The Technology of Adhesive Metal Bonding, by
E. Brum.
GERMAN, per, Z fuer Schweißtechnik, No 2, 1963,
pp 42-46. BISI 3417

Process for Producing Printed Effects on Knitted
Fabrics, by Henry Giesler, 6 pp.
GERMAN, Patent No 583,259. Patent Office

Scientific
Materials & Metallurgy (Contd)

Solid State Equilibrium in the Uranium-Aluminum-Carbon System, by Vittorio Cirilli, Cesare Brisi, 7 pp.

ITALIAN, per, Atti della Accademia della Scienze de Torino, Vol XCIV, 1959, 1960, pp 424-431. 9217189

AEC-AI-Tr-8

Microfractographic Observations of Sintered Uranium Oxide, by A. Bassi, G. Camona, et al.

ITALIAN, per, Energia Nucleare, Vol IX, No 9, 1962, pp 513-528.

*AERE-Harwell

Treatment of Effluents and Recovery of Uranium, by W. Maegi, 8 pp.

ITALIAN, per, Energia Nucleare, Vol X, No 5, 1963, pp 26-30. 9216089

AEC-Tr-6019

Alloys of Cerium Dioxide With Manganese, by Aldo Iandelli.

ITALIAN, per, Rendiconti, Accademia Nazionale Lincei, Vol XIII, 1952, pp 265-268.

*AEC

Survey Report on the Hua-t'ung-kou Mine, Fu-hsien Prefecture, Feng-t'ien Province, Manchuria, by Shuichi Tashiro, Shunnosuke Katayama. JAPANESE, rpt.

Dept of Interior
200(900) qUn34pr
No 712

Chromatography of Inorganic Compounds, by Shiro Marasawa, 14 pp.

JAPANESE, per, Japan Analyst, Vol XI, 1962, pp 71R-75R. 9216107

AEC-Tr-6072

Chemical Studies on Rare Element-Bearing Minerals in the Orient, Part 41: On Nogiznwalite, a New Mineral Found Near Ishikawa, Fukushima Prefecture, by Teikichi Kawai.

JAPANESE, per, Journal of the Chemical Society of Japan, Pure Chemical Section, Vol LXX, No 7, 1949, pp 268-270.

Dept of Interior
209(900) qUn33pr
No 385

Surfactants in Pulp Industries, by Hiroshi Fujii, Shigeo Tokunaga, 17 pp.

JAPANESE, per, Koroido to Kaimenkasseizai, No 2, 1961, pp 685-691. 9216117

AEC-Tr-6050

On the Improvement of Metallic Uranium Fuel, II, by Kazuo Maruya, Toshio Saito, et al.

JAPANESE, per, Nippon Genshiryoku Gakkaishi, No 5, 1963, pp 572-580.

*AEC

Scientific
Materials & Metallurgy (Contd)

Studies on Zr-Cu-Mo Base Alloy, Part II, by
Shigeo Aoki, Isao Tarora, et al.
JAPANESE, per, Nippon Genshiryoku Gakkaishi, No 5,
1963, pp 581-586.

*AEC

Activated Sintering of Uranium Dioxide Fuel, II,
by Kunio Suzuki, Kazuo Maruya, et al.
JAPANESE, per, Nippon Genshiryoku Gakkaishi, No 5,
1963, pp 587-592.

*AEC

Treatment of Metal Surfaces With Acid Hydrogen
Peroxide Solutions, by H. Kawamura.
JAPANESE, per, Nippon Kinzoku Gakkai-Shi, Vol XXIV,
1960, pp 710-714. (Condensed Tr)

HB 5839

Selected Articles From the Japanese Periodical
Tetsu to Hagane.

Vol XLVIII, No 11, 1962.
On the Melting Power of Coke With Cold Metal
Charges in the Oxygen LD Furnace, by Y. Aoyama,
H. Usui, (pp 1363,1364). HB 5766

Some Problems Arising From the Use of Coke in the
Basic Oxygen LD Process, by Y. Aoyama, et al,
(pp 1365,1366). HB 5767

Vol XLVIII, No 12, 1962, pp 1569-1574.
On the Equilibrium Relations Between Iron and
Exothermic Atmospheres Converted From Propane, by
K. Nagasaki, N. Komuro. *BISI 3531

Vol XLIX, No 3, 1963.
Behavior of Oxygen During the Oxidizing Period
of a Basic Arc Furnace Heat, by Ch. Asada, et al,
(pp 366-368). HB 6072

Changes in Composition During Consumable-Electrode
Vacuum Arc Melting, by T. Suzumoto, S. Dateyama,
(pp 465-468). HB 5970

Behavior of Columbium Carbides and Columbium Nitrides
in Steel, by K. Yamaguchi, et al, (pp 538-540). HB 6018

Vol XLIX, No 10, 1963.
Uranium Additions to Low-Alloy, High-Strength Steels,
by M. Hasegawa, I. Onoda, (pp 1541-1543). HB 6110

Scientific
Materials & Metallurgy (Contd)

Selected Articles From the Japanese Periodical
Tetsu to Hagane, (Contd)

Vol XLIX, No 10, 1963.
On the Effect of Uranium Additions on the
Behavior of Carbon and Sulfur in Austenitic
Stainless Steels, by M. Kawahata, et al,
(pp 1543-1545). HB 6107

Properties of Aluminum-Coated Steel Studied by
Prolonged Heating Tests, by K. Toki, S. Shinoda,
(pp 1589,1590). HB 6083

Vol XLIX, No 11, 1963, pp 1629-1631.
Improved Hot Workability of Austenitic Stainless
Steels, by Ch. Taniguchi, et al. HB 6097

Medium and Hard-Chilled Rolls, by S. Maj, Z. Wusatowski.
POLISH, per, Hutnik, Vol XIV, 1947, pp 519-534. *BISI 3527

The Production of Rolls of Spheroidal Graphite Cast
Iron With Indefinite Chill and of Semi-Chilled Rolls,
by B. Raczyński.
POLISH, per, Przeglad Odlewnictwa, Vol X, No 9, 1960,
pp 263-266. *BISI 3526

The Mechanism of Siliconizing Metals, by V. K. Titov,
E. F. Makarov.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrainsk RSR, No 1,
1962, pp 50-53. BISI 3493

Scientific
Mathematics & Data Processing

Selected Articles From the Russian Periodical
Dok Ak Nauk SSSR.

Amer Math Soc

Vol XCIII, 1954.

Defects of Meromorphic Functions, by A. A. Gol'dberg,
(pp 893-895).

On the Theory of Univalent Functions, by B. N. Rahmanov,
(pp 973-976).

Vol CXII, 1957, pp 599-602.

Asymptotic Behavior of Solutions of a Non-Linear
Boundary Problem in the Boundary Layer Theory, by
G. V. Gil', A. D. Myskis, 6 pp.

Vol CXIII, 1957, pp 1203-1205.

Polya's Theorem for Entire Functions of Two Complex
Variables, by A. A. Kozmanova.

The Relation Between the Rate of Growth of an Entire
Function of Several Complex Variables and the Set of
Singular Points of its Associated Function, by
M. S. Stavskiy.

RUSSIAN, per, Iz Vysshikh Ucheb Zaved Matemat, No 2(9),
1959, pp 227-232.

Amer Math Soc

Selected Articles From the Russian Periodical
Matemat Sbornik.

Amer Math Soc

Vol I, No 43, 1936, pp 815-844.

Boundary Problems in the Theory of Univalent
Functions, by M. Lavrent'yev.

Vol II, No 44, 1937, pp 467-499.

On a Boundary Value Problem for Polyharmonic
Equations, by S. L. Sobolev, 40 pp.

Vol VI, No 48, 1939, pp 95-138.

On Functions Regular in a Half-Plane, by V. I. Krylov.

Vol XXIII, No 65, 1948.

Determination of the Type of Certain Classes of
Simply Connected Riemann Surfaces, by L. I. Volkovyskiy,
(pp 229-258).

Convergent Sequences of Riemann Surfaces, by
L. I. Volkovyskiy, (pp 361-382).

Vol XXXIX, No 81, 1956, pp 253-266.

On Types of an Entire Function of Two Complex Variables,
by L. I. Ronkin.

Scientific
Mathematics & Data Processing (Contd)

Selected Articles From the Russian Periodical
Matemat Sbornik. (Contd)

Amer Math Soc

Vol XLI, No 83, 1957, pp 257-276.

On the Integral Representation and Expansion in
Generalized Taylor Series of Entire Functions of
Several Complex Variables, by M. M. Dzrbasjan.

Vol XLVIII, No 90, 1959, pp 335-376.

Generation of Limit Cycles From a Separatrix Forming
a Loop and From the Separatrix of an Equilibrium
State of a Saddle Node Type, by A. A. Andronov,
E. A. Leontovic.

Selected Articles From the Russian Periodical
Nauch-Tekh Informatsii.

No 5, 1963.

JPRS 22484

Basic Problems in Mechanizing Information Preparation
and Retrieval, by N. I. Tyshkevich, 11 pp, (pp 3-7).

Perceptron-Type Models for Recognition of Continuous
Patterns, by L. B. Nisnevich, 12 pp, (pp 25-27).

No 6, 1963.

JPRS 22547

Automating the Compilation of Formula Indicators of
Chemical Compounds, by G. E. Vleduts, Ts. D. Osipenko,
et al, 16 pp, (pp 13-17).

Machine Indexing of Abstract Journals, by
N. M. Sagalovich, 11 pp, (pp 18-20).

Better Use of the Universal Decimal Classification, by
I. Kh. Frenk, 5 pp, (pp 22, 23).

No 9, 1963.

JPRS 22415

A Chemical Code for Searching Spectrochemical
Information, by V. T. Aleksanyan, Z. B. Barinova,
et al, 12 pp, (pp 17-21).

Certain Questions in a Theory of Translation
Associated With the Overall Problem of Automating
Information Processes, by I. I. Revzin,
V. Yu. Rozentsvayg, 22 pp, (pp 32-37).

Certain Problems in Automatic Syntactic Analysis
of a Czech Scientific-Technical Text, by N. A. Pashchenko,
24 pp, (pp 38-43).

Scientific
Mathematics & Data Processing (Contd)

On the Dependence of the Growth of an Entire Function on the Distribution of the Zeros of Its Derivatives, by B. Ja. Levin, I. V. Ostrovskiy. RUSSIAN, per, Sibir Matemat Zhur, No 1, 1960, pp 427-455.

Amer Math Soc

Mathematical Problems of the Quantum Theory of Scattering for a Three-Particle System, by L. D. Faddeev. RUSSIAN, per, Trudy Ak Nauk SSSR, Matemat Inst imeni V. A. Steklova, Vol LXIX, 1963.

*AERE-Marwell

Solution of the Fundamental Problems of the Theory of Polynomials and Entire Functions Least Deviating From Zero, by N. N. Meyman. RUSSIAN, per, Trudy Moskov Matemat Obshch, No 9, 1960, pp 507-535.

Amer Math Soc

On Some Extremal Problems of the Theory of Analytic Functions, by S. Ja. Havinson. RUSSIAN, per, Uchenye Zapiski Moskov Gosudar Univ Ser 148 Matemat, Vol IV, 1951, pp 133-143.

Amer Math Soc

General Formulation of Shannon's Main Theorem in Information Theory, by R. L. Dobrusin. RUSSIAN, per, Uspehi Matemat Nauk, Vol XIV, No 6(90), 1959, pp 3-104.

Amer Math Soc

Construction of a Generalized Solution of the Cauchy Problem for a Quasi-Linear Equation of First Order by the Introduction of Vanishing Viscosity, by O. A. Oleinik. RUSSIAN, per, Uspehi Matemat Nauk, Vol XIV, No 2(86), 1959, pp 159-164.

Amer Math Soc

Uniqueness and Stability of the Generalized Solution of the Cauchy Problem for a Quasi-Linear Equation, by O. A. Oleinik. RUSSIAN, per, Uspehi Matemat Nauk, Vol XIV, No 2(86), 1959, pp 165-170.

Amer Math Soc

Forecasting Atmospheric Pressure Fields Using Equations of Hydrodynamics, by V. M. Berezin, 8 pp. RUSSIAN, per, Vest Moskov Univ, Ser Fiz i Astron, No 5, 1963, pp 28-33.

JPRS 22646

Some Characteristics of Correct Syntactic Structure, by L. N. Jordanskaya, 20 pp. RUSSIAN, per, Voprosy Yazykoznaniya, Vol XII, No 4, 1963, pp 102-112.

JPRS 22415

Scientific
Mathematics & Data Processing (Contd)

New Form of Equations of the Motion of the Satellite
and Its Application to the Investigation of the
Motions Close to the Kepler Ones, by G. E. Kuzmak,
Yu. M. Kopnin.
RUSSIAN, per, Zhur Vychislitel Matemat i Matemat Fiz,
Vol III, No 4, 1963, pp 730-741.

*FTD-TT-63-1201

Selected Articles From the Chinese Periodical
Acta Mathematica Sinica.

Amer Math Soc

Vol III, 1953, pp 288-323.
On the Theory of Functions of Several Complex
Variables. I. A Complete System of Orthogonal
Functions in the Hyperbolic Space of Matrices,
by Hua Loo-keng.

Vol V, 1955.
On the Theory of Functions of Several Complex
Variables. II. A Complex Orthonormal System
in the Hyperbolic Space of the Lie-Hypersphere,
by Hua Loo-keng, (pp 1-25).

Differential Equations of Mixed Type, by
Ding Shia-shi, 11 pp, (pp 193-204).

On the Theory of Functions of Several Complex
Variables. III. A Complete Orthonormal System
in the Hyperbolic Space of Symmetric and Skew
Symmetric Matrices, by Hua Loo-keng, (pp 205-242).

Inequalities Involving Determinants, by Hua Loo-keng,
(pp 463-470).

Comparison of Various Mathematical Methods to
Calculate the Slowing-Down Density in a Heavy
Medium, by F. Le Berre, R. Maerker, 31 pp.
FRENCH, rpt. 9216116

AEC-Tr-6055

Transport Theory: P_1 Approximation, by H. G. Kaper,
8 pp.
FRENCH, rpt, Apr 1961. 9216108

AEC-Tr-6070

Transport Theory: P_1 Approximation and the Bethe-
Tonks-Hurwitz Method, Numerical Results, by H. G. Kaper,
H. Laborde Castex, 12 pp.
FRENCH, rpt, Mar 1962. 9216115

AEC-Tr-6057

Practical Utilization of the Penelope Program,
by F. Le Berre, 5 pp.
FRENCH, rpt, Jun 1962. 9216113

AEC-Tr-6061

Scientific
Mathematics & Data Processing (Contd)

One Integral Equation of Geoid, by H. Moritz.
GERMAN, rpt, Eine Integralgleichung des Geoides.

ACIC

A Review, Concerning the Electronic Data Processing
System for the Photogrammetric Cadastral Survey, by
R. Conzett.

GERMAN, rpt, Ueberblick ueber ein Elektronisches
Datenverarbeitungssystem fuer die Photogrammetrische
Grundbuchvermessung.

ACIC

The Effect of Modern Programming Methods and the
Statement of Programming Problems in the Design
of Computers, by Immo O. Kerner, 8 pp.
GERMAN, per, Jenaer Jahrbuch, Part I, 1963, pp 201-208.

ACSI I-3522
ID 2246313

The Theory of General Plane Quadratic Graphs, by
Othmar Baier, 36 pp.
GERMAN, per, Mathematische Annalen, Vol CXII, 1936,
pp 630-651. 9689729

Emmanuel Coll
Res Lang Ctr
E-T-G-63-11

Mathematical Calculation of Processes in the Blast
Furnace for Planning and Control of Operation and of
Ore Selection, by R. Wartmann.
GERMAN, per, Stahl und Eisen, Vol LXXXIII, Nov 1963,
pp 1414-1425.

*BISI 3536

Facts and Opinions in the Debate on the Use of Mathematics,
by Laszlo Alpar, 24 pp.
HUNGARIAN, per, Magyar Tudomany, Vol VIII, No 9, 1963,
pp 620-636.

JPRS 22783

Theory of Transmission of Information, by A. N. Kolmogorov.
RUMANIAN, per, Acad Republicii Popularare Romine An
Romino-Soviet, Ser Mat Fiz, Vol XIII, No 1(28), 1959,
pp 5-33.

Amer Math Soc

On the Stability of Periodic Motions, by V. M. Starzinskiy.
RUMANIAN, per, Buletinul Institutului Politehnic din Iasi,
Serie Noua, Vol IV(8), No 3, 4, 1958, pp 16-68.

Amer Math Soc

On the Stability of Periodic Motions. II. by

V. M. Starzinskiy.

RUMANIAN, per, Buletinul Institutului Politehnic din Iasi,
Serie Noua, Vol V(9), No 1, 2, 1959, pp 51-100.

Amer Math Soc

Scientific
Mathematics & Data Processing (Contd)

International Seminar for Mathematical Linguistics,
Interview With Professor G. C. Moisil, by Catinca Muscan,
8 pp.
RUMANIAN, np, Tribuna, Vol VII, No 47, 21 Nov 1963,
pp 1, 9.

JPRS 22465

Reversible Operational Amplifier, by N. Ye. Pukhov, 6 pp.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrain RSR, No 4,
1962, pp 466-468.

JPRS 22607

Determination of the Characteristics of a
Transportation Network by the Method of Successive
Analysis of Variations, by O. O. Bakayev, S. V. Branovyt'ska,
et al, 7 pp.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrain RSR, No 4, 1962,
pp 469-472.

JPRS 22607

Nuclear Science & Technology

Ohmic Heating of a Plasma on the Toroidal Apparatus -
Tokamak - 3, by L. A. Artsimovich, S. V. Mirnov, et al.
RUSSIAN, bk, Issledovanie Ohmicheskogo Nagrevaniya Plazmy
na Toroidal'noi Ustanovke - Tokamak - 3, 1963, 20 pp.

*AEC

Selected Articles From the Russian Report
Joint Institute for Nuclear Research, 1963.

Ratio of Cross Sections for Formation of An Sc⁴⁴
Isomer Pair in Reactions Involving Heavy Ions, by
V. V. Bredel, B. A. Gvozdev, et al, 10 pp. 9216868

AEC-Tr-6103

The Formation of a Spontaneously Fissioning Isomer
in Reactions With α - Particles and Deuterons, by
G. N. Flerov, S. N. Polikanov, et al, 5 pp. 9216869

AEC-Tr-6102

Synthesis of Element 102 Isotope With Mass Number
256, by E. D. Donets, V. A. Shchegolev, et al.

*AERE-Harwell

Calculation of Phase Relations in the Cyclotron,
by G. N. Vyalov.

*AERE-Harwell

Analysis of Experiments Made in Alize I, by J. Bailly,
R. Delayre, et al, 25 pp.
RUSSIAN, rpt, Light Water Lattices 28 May-1 Jun 1962,
1962, pp 133-154. 9216102

AEC-Tr-6029

Technical Problems in Using Water Systems, by J. Bailly,
Y. Girard, 15 pp.
RUSSIAN, rpt, Light Water Lattices 28 May-1 Jun 1962,
1962, pp 155-165. 9216090

AEC-Tr-6030

Scientific
Nuclear Science & Technology (Contd)

Material From the Working Conference on Slow-Neutron Physics.

RUSSIAN, rpt, Ob'yedinennyi Institut Yadernykh Issledovaniy, 1962.

*PTD-TT-64-22

Principles of the Chemical Technology of Artificial Radioactive Elements, by Ya. I. Zil'berman. (DC-10187)
RUSSIAN, bk, Osnovy Khimicheskoy Tekhnologii Iskusstvennykh Radioaktivnykh Elementov, 1961, pp 1-332.

*JPRS

Production of Metal Uranium Ingot From Uranium Oxides by Electrolysis, by V. Rafal'ski, E. Taubman.
RUSSIAN, rpt, Poluchenie Litogo Metallicheskogo Urana Iz Okislov Urana Putem Elektroliza Rasplavlenykh Sred, 7 pp.

*AEC

Selected Articles From the Russian Report
Proceedings of the Conference on Large Radiation
Sources in Industry, 8-12 Sep 1959.

Vol I, 1960.

Units With Cobalt-60 Gamma Radiation Sources for Use in Research on Radiation Technology of Rubber and Plastics, by J. Smirola, 11 pp, (pp 105-114). 9217184

AEC-Tr-6115

Description of Radiation Sources Installed at the French Atomic Energy Commissariat, by P. Leveque, 6 pp, (pp 141-147). 9217185

AEC-Tr-6116

Some Problems of Calculation and Design of High Activity Gamma Units, by A. V. Bibergal, N. I. Leshchinskii, et al, 15 pp, (pp 163-177). 9217186

AEC-Tr-6118

Use of Microporous Nuclear Fuels as a Means of Utilizing the Kinetic Energy of Fission Products in Chemical Synthesis, by R. Coekelbergs, P. Gosselain, et al, 36 pp, (pp 191-221). 9217187

AEC-Tr-6119

The Use of Ionizing Radiation in the Vulcanization of Silicon Rubber, by A. S. Kuz'minskiy, T. S. Nikitina, et al, 11 pp, (pp 347-358). 9217213

AEC-Tr-6122

Vol II, 1960.

Gamma-Radiation-Induced Peroxidation of Certain Hydrocarbons, by M. Durup, J. Durup, et al, 11 pp, (pp 17-27). 9217232

AEC-Tr-6032

Radiochemical Oxidation of Hydrocarbons, by Roger Montarnal, Monique Brun, 22 pp, (pp 29-50). 9217233

AEC-Tr-6033

Scientific
Nuclear Science & Technology (Contd)

Selected Articles From the Russian Report Proceedings of
the Conference on Large Radiation Sources in Industry,
8-11 Sep 1959. (Contd)

Vol II, 1960.

Use of Fission Products in a Pilot Set-Up to Initiate
Oxidation of Paraffin, by G. Ioanid, A. Dragut, et al,
9 pp, (pp 51-59). 9216091

AEC-Tr-6034

Radiochemical Chlorination of a Carbon Chain Linked
to a Coo-Group Propionic Acid and Some Derivatives, by
P. Traynard, P. Verrier, 13 pp, (pp 81-95). 9216092

AEC-Tr-6035

The Prospects for the Industrial Use of Radiation-
Thermal Cracking of Normal Hydrocarbons, by
A. V. Topchiyev, L. S. Polak, et al, 6 pp, (pp 131-138).
9216093

AEC-Tr-6036

Radiochemical Synthesis of Colorants, by F. Balestic,
M. Magat, 15 pp, (pp 149-165). 9216094

AEC-Tr-6037

Sterilization of Medicaments by Gamma Rays.
Note I. Ampoules Containing Distilled Water, by
Paul Adrián, Dan Arizan, et al, 10 pp, (pp 261-271).
9217234

AEC-Tr-6038

Irradiation Plant, Comparative Operating Costs of
Plant Using Cobalt-60 or Spent Nuclear Fuel Elements,
by J. R. Puig, 24 pp, (pp 321-339). 9216095

AEC-Tr-6039

Depth Measurement of Soil Moisture Content by Moderation
of Fast Neutrons, by C. Andrieux, L. Buscarlet, et al,
34 pp.

RUSSIAN, rpt, Proceedings of the Conference on Radioisotopes
in Soil-Plant Nutrition Studies, 26 Feb-2 Mar 1962, 1962,
pp 187-217. 9216086

AEC-Tr-5989

Influence of Concentration on the Uptake of Labeled
Rubidium by Excised Barley Roots, by Myriam Vallee
Shealtiel, 8 pp.

RUSSIAN, rpt, Proceedings of the Conference on Radioisotopes
in Soil-Plant Nutrition Studies, 26 Feb-2 Mar 1962, 1962,
pp 239-246. 9216087

AEC-Tr-5990

Actual Problems of the Distribution of Radioisotopes
and the Kinetics of Their Excretion, by Yu. I. Moskalev,
19 pp.

RUSSIAN, rpt, Proceedings of the Scientific Meeting on
Diagnosis and Treatment of Radioactive Poisoning, 15-18
Oct 1962, 1963, pp 287-306. 9217231

AEC-Tr-6027

Scientific
Nuclear Science & Technology (Contd)

Diagnosis and Treatment of a Local and Afterwards
Generalized Plutonium Contamination, by J. Lafuma, 5 pp.
RUSSIAN, rpt, Proceedings of the Scientific Meeting on
Diagnosis and Treatment of Radioactive Poisoning,
15-18 Oct 1962, 1963, pp 381-385. 9216056

AEC-Tr-6028

Radioactive Disequilibrium and Isotopes of Thorium in
Geochronology, by C. Coquema, R. Coulomb, et al, 16 pp.
RUSSIAN, rpt, Proceedings of the Symposium on Radioactive
Dating, 19-23 Nov 1962, 1963, pp 133-147. 9217230

AEC-Tr-6025

The Separation and Measurement of Al^{26} and Be^{10} in
Meteorites, by E. H. Crevecoeur, O. A. Schayeff, 6 pp.
RUSSIAN, rpt, Proceedings of the Symposium on Radioactive
Dating, 19-23 Nov 1962, 1963, pp 335-341. 9216090

AEC-Tr-6026

Critical Experiment as a Means of Revealing the Physical
Characteristics of a Reactor, by V. A. Kuznetsov, 15 pp.
RUSSIAN, bk, Simpozium po Eksponentzial'nym i
Kriticheskim Eksperimentam, Mezhdunarodnoye Agentstvo po
Atomnoy Energii, 2-6 Sep 1963, pp 1-11. 9690031

FTD-TT-63-978

Effect of a Transverse Magnetic Field on a Toroidal
Discharge in a Strong Longitudinal Magnetic Field,
by B. M. Grigorovich, V. S. Mukhovatov, et al.
RUSSIAN, bk, Vliyanie Poperechnogo Magnitnogo Polya na
Toroidal'nyi Razryad v Sil'nom Prodol'nom Magnitnom Pole,
1963, 24 pp.

*AEC

Probe Method of Measuring the Displacement of a Current
Pinch in Cylindrical and Toroidal Chambers, by S. V. Mirnov.
RUSSIAN, bk, Zondovaya Metodika Izmereniya Smeshcheniya
Tokovogo Shnura v Tsilin Driveskikh i Toroidal'nykh
Kamerakh, 1963, 20 pp.

*AEC

An Electron-Diffraction Study of the Structures of Thin
Films of Cadmium Sulfide, Selenide and Telluride, by
S. A. Semiletov, 10 pp.
RUSSIAN, per, Kristallograf, Vol I, No 3, 1956,
pp 304-310. 9216105

AEC-SC-T-511

On Propagation of Instantaneous Excitations in a
Medium With a Nonlinear Dependence of Tensions on
Deformation, by G. I. Barenblatt, 13 pp.
RUSSIAN, per, Prik Matemat i Mekh, Vol XVII, 1953,
pp 455-460. 9216106

AEC-UCRL-Tr-989(L)

Reactions of Uranyl Nitrate With Amines, by V. M. Vdovenko,
D. N. Suglobov, et al.
RUSSIAN, per, Radiokhim, No 5, 1961, pp 636,637.

*AEC

Scientific
Nuclear Science & Technology(Contd)

Determination of the Correction for Thermal Inertia
of the Calorimeter During Calorimetric Measurements
of Radioactive Preparations, by N. S. Shimanskaya, 6 pp.
RUSSIAN, per, Trudy Radievyi Institut Ak Nauk SSSR,
Vol IX, 1959, pp 126-130. 9217215

AEC-UCRL-Tr-1004(L)

Electrophilic Substitution Reactions At Saturated Carbon
Atom, by Tai Li-hsin, 38 pp.
CHINESE, per, Hua-hsueh T'ung-pao, No 5, 1963, pp 1-11.

JPRS 22932

Selective Analysis of Zn and Co by Double Tapping
With Radioactivity and Gamma Ray Spectrometry, by
Robert Collee.
FRENCH, rpt.

*AEC

Attenuation of Neutrons in Water and Graphite,
by M. Lott, J. P. Millot, et al, 29 pp.
FRENCH, rpt. 9216860

AEC-Tr-6113

Study of Reflection and Scattering of Fast Neutrons
in a Wall, by J. P. Barthe, 9 pp.
FRENCH, rpt, 9216118

AEC-Tr-6051

Experimental Values of Moments for the Slowing-Down
of Fission Neutrons, by J. Rastoin, 7 pp.
FRENCH, rpt, Dec 1959. 9217235

AEC-Tr-6040

Experimental Study of Shielding, by P. Pepin,
J. Rastoin, et al, 30 pp.
FRENCH, rpt, 1961. 9216863

AEC-Tr-6093

Calculation for a Secondary Shield, by J. P. Barthe,
6 pp.
FRENCH, rpt, May 1961. 9216853

AEC-Tr-6066

Propagation of Neutrons in an Annular Space, by
J. Brisbois, 11 pp.
FRENCH, rpt, Jun 1961. 9216791

AEC-Tr-6086

Calculations of the Neutron Spectrum, The Transport
Equation and Its Solution With Some Approximations, by
H. G. Kaper, F. Le Berre, et al, 44 pp.
FRENCH, rpt, Jul 1961. 9217206

AEC-Tr-6107

Propagation of Fission Neutrons in Graphite and
Sodium Comparison of Calculation and Experiment in
the Naiade Setup, by F. Le Berre, P. Pepin, 18 pp.
FRENCH, rpt, Jan 1962. 9216859

AEC-Tr-6092

Scientific
Nuclear Science & Technology (Contd)

Attenuation of Neutrons of Naiade in a Graphite
Block-Calculation of the Thermal Flux by the Two-Group
Diffusion Theory, by J. Brisbois, 14 pp.
FRENCH, rpt, Jan 1962. 9216862

AEC-Tr-6095

The Transport Theory in a Heavy Medium, by
H. G. Kaper, 16 pp.
FRENCH, rpt, Mar 1962. 9216864

AEC-Tr-6094

Holes in the Shield of a Reactor Formulary Project,
by C. Devillers, 26 pp.
FRENCH, rpt, Jul 1962. 9217193

AEC-Tr-6108

Practical Utilization of the Programs Mannon 749/B
and Carmen/868, by J. P. Barthe, 14 pp.
FRENCH, rpt, Dec 1962. 9216798

AEC-Tr-6063

Device for Taking Sodium Samples in a Circuit for
Quantitative Analysis of Impurities, by J. Sannier,
R. Vingot.
FRENCH, rpt, 30 Sep-2 Oct 1963.

*AEC

Observation on the Recrystallization of UO_2 at
Elevated Temperatures, by M. Yunus.
FRENCH, rpt, Conference on the Technology of New Nuclear
Materials, Especially Non-Metallic Fuel Cartridges, Prague,
1-5 Jul 1963.

*AEC

Radiation Chemistry of Ammonia Synthesis of
Hydrazine, by J. R. Puig, E. Schwarz, 49 pp.
FRENCH, rpt, Conference on the Use in Industry, of
Sources of Intense Radiation, 27-31 May 1963. 9216096

AEC-CONF-194-2

Study of a Heterogeneous Poisoning Method and Its
Practical Application, by R. Caizergues.
FRENCH, rpt, Criticality Control, 1961, pp 315-341.

*AEC

Fast Neutron Dosimetry for Radioprotection Near
Large Accelerators. Application to the Proton
Synchrotron Saturne, by Philippe Tardy-Joubert, 16 pp.
FRENCH, rpt, Dosimetrie des Neutrons Rapides en Vue de la
Radioprotection Aupres des Grandes Accelerateurs
Application au Sunchrotron a Protons Saturne, 1963.
9216796

AEC-Tr-6052

Dosimetry and Spectrometry of Fast Neutrons by
Radioactivation, by J. Lamberieu, 48 pp.
FRENCH, rpt, Dosimetrie et Spectrometrie des Neutrons
Rapids par Radioactivation, 1963. 9216058

AEC-HW-Tr-59

Scientific
Nuclear Science & Technology (Contd)

Some Results of Irradiations of the Fuel Elements
for Rapsodie, by J. P. Mustelier.

GERMAN, per, Proceedings of the Symposium on Radiation
Damage in Solids and Reactor Materials, Vienna, 1963,
pp 163-183.

*AEC

Kinetics of the Reaction of Pure Oxygen With Uranium
Mononitride, by C. Moreau, J. Philippot.

GERMAN, per, Comptes Rendus, Vol CCLVI, 1963,
pp 5366-5369.

*AEC

Chemical Concentration of Uranium Ores, by R. Gautier,
11 pp.

GERMAN, per, Energie Nucleaire, No 4, 1962, pp 600-606.
9217229

AEC-Tr-6020

Calculation of the Dose Received in the Case
of a Critical Excursion of 10^{18} Fissions, by J. P. Barthe,
6 pp.

GERMAN, rpt, Feb 1961. 9216109

AEC-Tr-6067

Radioactive Fallout, by A. van der Linde, R. Braams,
21 pp.

GERMAN, per, Chemische Weekblad, Vol LVII, 1961,
pp 501-505. 9216872

AEC-UCRL-Tr-1000(L)

Investigation of the Extraction of Metal Ions Using
Radioisotopes. Communication 3 : Extraction of Mn II-,
Fe III-, Co II-, Cu II-, and Zn II- Ions With
8-Hydroxyquinoline-N-Oxide, by J. Mikulski.

GERMAN, per, Kernenergie, Vol VI, 1963, p 71.

*AEC

Determination of the Enthalpies of Formation of
Uranium Oxides by Means of Dynamic Difference
Calorimetry, by H. Scheibe, W. Ermischer.

GERMAN, per, Kernenergie, Vol VI, No 4, 1963,
pp 178-180.

*AERE-Harwell

The Effect of Penetrating Radiation From Radium
on Colloids, II, by Albert Fernau, Wolfgang Pauli,
28 pp.

GERMAN, per, Kolloid-Zeitschrift, Vol XX, 1917, pp 20-33.
9217202

AEC-Tr-6090

Phosphate Glass Dosimeter for Routine Personnel Dose
Surveillance in Nuclear Installations, by K. Becker.

GERMAN, per, Nukleonik, Vol V, No 4, 1963, pp 154-159.

*AERE-Harwell

Uranium Properties Produced by Extrusion Sintering, by
G. Cizeron, J. Peix, 7 pp.

GERMAN, per, Planseeberichte fuer Pulvermetallurgie, No 10,
1962, pp 137-143. 9216861

AEC-Tr-6084

Scientific
Nuclear Science & Technology (Contd)

Abnormal X-Ray Diffusion of Heavy Atoms in the Range of
the K and L Series According to the Wave Mechanical
Dispersion Theory, by H. Eisenlohr, G.L.J. Muller.
GERMAN, per, Z fuer Physik, Vol CXXXVI, 1954,
pp 491-533.

*AEC

Measurements of Ambient Radioactivity -- Ispra 1960,
by A. Anzani, A. Benco, et al, 54 pp.
ITALIAN, rpt, Jul 1961. 9216871

AEC-UCRL-Tr-998(L)

Effects of Variations of Ambient Pressure on the
Emission Intensities of Some Elements in the Arc,
by Giulio Brautti.
ITALIAN, per, La Metallurgia Italiana, No 8,
1958, pp 340-342.

*AEC

³²P-Labelled Radiocolloid, by B. Bellion,
G. Buchi, et al.
ITALIAN, per, Minerva Nucleare, Vol VII, No 6, 1963,
pp 237-243.

*AERE-Harwell

Possible Band Structures in Nuclear Levels by
Mitsuo Sakai, 18 pp.
JAPANESE, rpt. 9215566

AEC-NP-Tr-1060

Hindrance of Gamma Transition Probability by
Pairing Correlation Interaction, by Hidetsugu
Ikegami, Takeshi Udagawa, 15 pp.
JAPANESE, rpt. 9215566

AEC-NP-Tr-1060

Davydov Model and Nuclear Shape, by Toshimitsu
Yamazaki, 31 pp.
JAPANESE, rpt. 9215566

AEC-NP-Tr-1060

Radiation Effects on Cellulose, by Rikizo Imamura,
16 pp.
JAPANESE, per, Genshiryoku Kogyo, Vol IX, No 1, 1963.
9217224

AEC-Tr-6114

Analysis of Temperature Dispersion Curves of Dynamic
Modulus in Cross-Linked Polymers, by Kyoichi Shibayama.
JAPANESE, per, Kobunshi Kagaku, Vol XIX, 1962, pp 543-546. *AEC

Scientific
Nuclear Science & Technology (Contd)

Selected Articles From the Japanese Periodical
Nippon Genshiryoki Gakkaishi.

Vol IV, No 10, 1962, pp 703-707. 9216865
Experimental Study on the Penetration of ^{60}Co
Y-Rays Through a Finite Heterogeneous Media, II,
by Hiroji Mochizuki, Yoshida Tanaka, et al, 12 pp.

AEC-Tr-6054

Vol IV, No 11, 1962, pp 797-807. 9216792
On the Analysis and Interpretation of Foil Data,
by Akira Furuhashi, 36 pp.

AEC-Tr-6085

Vol V, No 5, 1963.
Basic Problems in Evaluating Power Reactor
Safety, by Ryo Ikegami, (pp 593-600).

*AEC

Training in Nuclear Science and Engineering, by
Raymond L. Murray, (pp 612-616).

Vol V, No 6, 1963, pp 497-503.
Sensitivities of Fuji Badge Film to β -Rays and
Evaluation of β -Rays Dosage, by I. Miyanaga,
K. Bingo, et al.

*AERE-Marwell

Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Hobunshu, 1963.

*AEC

Preparation of Carrier-Free Iodine-131 With
Adsorption Method, II, Sorption of Iodine on
Platinum Metal Surface, by C. Chang.

No 3.
On the Physical and Chemical Pre-Use Tests of
Sealed Sources, by H. Yamashita, (pp 25-27).

Experimental Study on Fire-Resistivity of Radioisotope
Containers and Capsules, by T. Moriya, (28-30).

Thermal Neutron Absorption by Elements in Soil and
Correction of Moisture Content Measured by Neutron
Moisture Meter, by H. Ono, (pp 98-100).

Graft Polymerization on Nylon 6, by F. Kobayashi,
(pp 124-126).

X-Ray Spectrochemical Analysis Using Pm-147 Beta-Ray
Source, by S. Enomoto, (pp 161-163).

Fluorescent X-Ray Excitation by Irradiation and Its
Measurement, by H. Imamura, (pp 164-166).

Scientific
Nuclear Science & Technology (Contd)

Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Hobunshu, 1963. (Contd)

*AEC

No 3.
The Sensitivity Improvement in the Applications of Beta-Rays Backscattering by the Energy Discrimination Method, by S. Enomoto, (pp 167-169).

Activation Analysis of Sodium and Potassium in Biological Material, by R. Hori, (pp 173-175).

Activation Analysis of Oxygen by Means of γ , n Nuclear Reaction, by M. Kobayashi, (pp 179-181).

Radioactivation of Elements by Use of Pile Neutrons -- The Extent of the Formation of Short-Lived γ Active Nuclides, by M. Okada, (pp 182, 183).

Application of a Large Accelerator to Production of Irradiated Polyethylene Products, by Y. Tsuji, (pp 191-193).

Radiation-Induced Thermoluminescence for Irradiated Polymers, by Y. Nakai, (pp 223-225).

Radiation Thermoluminescence Study on Radiation-Induced Solid State Polymerization of Cyclic Monomers, by K. Kamada, (pp 226-228).

The Solid State Polymerization and Copolymerization of 3-Halogenomethyl-3-Ethyloxetanes, by M. Miura, (pp 229-231).

Radiation-Induced Polymerization in Crystal, by K. Hayashi, (pp 232-234).

Radiation-Induced Polymerization in Formaldehyde in Liquid State, by S. Nakashio, (pp 234-237).

Gamma-Ray Induced Copolymerization of Formaldehyde, by H. Yamaoka, (pp 238, 239).

Radiation-Induced Polymerization of Styrene Oxide, by Y. Tabata, (pp 243, 244).

Gamma Radiolysis of Amino Acid and Enzyme Protein in Dry Powder and In Solution, by S. Ganno, (pp 248-250).

A Fundamental Study in the Neutron Radiography, by M. Kabayashi, (pp 265-267).

**Scientific
Nuclear Science & Technology (Contd)**

**Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Hobunshu, 1963. (Contd)**

*AEC

No 3.

**Thickness Measurement of Polymer Thin Films
With the Use of a Silicon Junction Alpha-Particle
Detector, by K. Teranishi, (pp 268-270).**

**A New Trace Analysis Using Radioactive Isotope
and Determination of Traces of Mercury in Rice,
by N. Suzuki, (pp 274-276).**

**A Tracer Study on the Solid Solubility of Nickel
in Silicon, by M. Yoshida, (pp 277-279).**

**Diffusion of Solute With Low Solubility, by
S. Miura, (pp 280-282).**

**Self-Oxidation Reactor of ^{124}Sb , III, by
T. Kambara, (pp 283-285).**

**Study of the Catalytic Role of Metal Surface by
Means of Tritium as Tracer, by T. Takeuchi,
(pp 286-288).**

**Radiation-Induced Polymerization of Styrene Oxide,
by T. Matsuda, (pp 345-347).**

No 4.

**Production of Radioisotopes in High Specific
Activity With Fast Neutrons in Nuclear Reactor,
by N. Shibata, (pp 18-20).**

**Production of Radioisotopes in High Specific
Activities Preparation of ^{51}Cr in a High Specific
Activity by the Use of Potassium Chromate, by
N. Shibata, (pp 21-23).**

**Production of Radioisotopes in High Specific
Activities on the Preparation of ^{32}P in a High
Specific Activity by the Szilard-Chalmers Method,
by N. Shibata, (pp 24-26).**

**The Szilard-Chalmers Process of Complex-Ion on
Ion-Exchanger, by T. Matsuura, (pp 27-29).**

**Fast Response and Precision Beta-Ray Thickness
Gauge, by S. Umeda, (pp 30, 31).**

**β -Ray Thickness Regulator in Plastic Sheet Plant,
by K. Koizumi, (pp 32-35).**

**Scientific
Nuclear Science & Technology (Contd)**

**Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Hobunshu, 1963. (Contd)**

*AEC

No 4.

Analysis of Manufacturing Process of Asbestos
Cement Board by Gamma-Ray Concentration-Meter and
Beta-Ray Thickness-Gauge, by H. Imamura, (pp 40-42).

Method for Measuring Density and Thickness of Object
by Y-Rays Scattering, by I. Tajiri, (pp 43-45).

On a Density Meter Surface Type Utilized Gamma-Ray
Back-Scattering, by T. Uemura, (pp 46-48).

Gamma-Ray Soil-Content Meter for a Pump Dredger, by
S. Kobayashi, (pp 55-57).

Application of Gamma Ray Level Gage to Measurement of
Solid-Level in the Blower Furnace, by H. Suzuki, (pp 58-60).

Gamma-Ray Level Gauge for the High Pressure Vessel, by
T. Sumi, (pp 61-63).

Train Detection Utilizing Absorption and Scattering
Phenomena of Radiation, by A. Kobayashi, (pp 67-69).

The Practical Use of the Railway Signaling
System Utilizing Radioisotope, by S. Sakai, (pp 70-72).

Activation Method Applied to Dilution Measurement in
the River, by M. Kobayashi, (pp 79, 80).

Movement of Pig Iron in the Blast-Furnace Hearth, by
H. Mori, (pp 82-84).

Application of Double Tracer Technique in the Process
Analysis of Carbon Black Plant, by T. Hirayama,
(pp 85-87).

Some Problems on Continuous Measurement of Engine
Parts Wear, by A. Ohno, (pp 88-90).

The Measurement of Engine Wear by a Radioactive
Tracer Method, by N. Yamaki, (pp 91-93).

Continuous Measurement of Pitting Wear by Radioactive
Specimen, by H. Nakamura, (pp 94-96).

Preparation of Ion Exchange Membranes From Graft
Copolymers Obtained by Vapour Phase Radiation
Grafting, by K. Shinohara, (pp 97-99).

**Scientific
Nuclear Science & Technology (Contd)**

**Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Hobunshu, 1963. (Contd)**

*AEC

No 4.

Radiation-Induced Graft Copolymerization of
Butadiene to Polyolefine, by M. Kadonaga, (pp 100-102).

The Vapor Phase Grafting or Vinyl Chloride to
Polyethylene by γ -Irradiation III, Some Properties
of Graft Copolymers, by M. Kadonaga, (pp 103-105).

Gamma-Ray Induced Graft Copolymerization of Styrene on
Cellulose Acetate, II, by K. Hayakawa, (pp 106-108).

Graft Copolymerization by the Technique of Pre-
Irradiation in Air at Low Temperature, by T. Matsuda,
(pp 109-111).

Effects of Monomer Diffusion on Radiation-Induced
Graft Copolymerization, by H. Matsuo, (pp 115-117).

Grafting of Isoprene to Pre-Irradiated Polyethylene
by Titanium Trichloride, by A. Amemiya, (pp 115-117).

Graft Polymerization of Styrene Monomer and Mixed
Monomer of Styrene and Acrylonitrile on to
Acrylonitrile-Butadiene Copolymer, by A. Takahashi,
(pp 118-120).

Radiation Induced Graft Copolymerization With Ternary
Mixtures of Comonomers, by I. Sakurada, (pp 121-123).

Studies on γ -Ray Induced Graft Copolymer of Styrene
Onto Polypropylene IV, Some Mechanical Properties, by
M. Kadonaga, (pp 127-129).

Physical Properties of Poly-Propylene-Styrene Graft
Copolymer Induced by Irradiation, by S. Iida,
(pp 130-132).

ESR Studies of Radiation Graft-Copolymerization of
Polyethylene and Styrene, by N. Tamura, (pp 133-135).

Electron Irradiation of Polymer-Filler Systems, by
A. Asatsuma, (pp 136-138).

Radiation Effects of Polyoxymethylene, by K. Iikichi,
(pp 139, 140).

Effects of Gamma Radiation on Aqueous Solutions of
Various Polymers, by I. Sakurada, (pp 141-143).

Scientific
Nuclear Science & Technology (Contd)

Selected Articles From the Japanese Periodical
Nippon Isotope Kaigi Nibunshu, 1963.(Contd)

*AEC

No 4.

Halogenation of Polyethylene by Radiation, by
A. Takahashi, (pp 144-146).

Irradiation Effects on Polymer Blend, by S. Iida,
(pp 150-152).

Industrial Production of Irradiated Polyethylene, by
K. Nakamada, (pp 153-155).

Application of Radionuclides Labeled Bacteria in
Food Sanitation Studies IV. On the Bacterial
Contamination and Decontamination of Living Oyster,
by T. Bito, (pp 216-218).

Real Solvation Energies and the Activity Coefficients of
Separate Ions in Monoaqueous and Mixed HCl Solutions, by
N. A. Izmaylov, Yu. F. Rybkin, 9 pp.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrainsk RSR, 1962,
pp 1071-1075. 9217200

AEC-Tr-6110

Scientific
Physics

Radio Wave Propagation and the Ionosphere, by
Ya. A. Alpert.
RUSSIAN, bk.

CB

Surface Properties of Semiconductors, by
A. N. Frumkin.
RUSSIAN, bk.

CB

The Atomic Nucleus, by M. Korsunsky.
RUSSIAN, bk, 413 pp.

Dover Pub House

Device for Electrical Prospecting by the Magnetotelluric
Method by Yu. B. Khomenyuk, 6 pp.
RUSSIAN, rpt, 20 Jul 1960.

JPRS 21953

A Device for Simultaneous Recording of Several
KS Parameters and the PS Curve on a Single Core Cable,
by O. V. Rudnev, 5 pp.
RUSSIAN, rpt, 26 Jun 1961.

JPRS 21953

Description of an Invention for an Author's Certificate,
by I. A. Spintsis, 6 pp.
RUSSIAN, rpt, Bulletin of Inventions, No 19, 1962.

JPRS 21953

The Long-Period Geomagnetic Variation, by Yu. D. Kalinin,
17 pp.
RUSSIAN, bk, Spravochnik po Peremennomu Magnitnomu Poliu
SSSR, Chapter 2, Leningrad, 1954.

Dept of Interior
030 qC15t
No 379-R

The Digital System of Storing and Retrieving Information,
by A. F. Belov, A. L. Belous, 44 pp.
RUSSIAN, bk, Tsifrovaya Sistema Nakopleniya i Obrabotki
Informatsii AI-2048, 17 Apr 1963, pp 1-37; 52; 100; 101;
109; 110; 143.

JPRS 22930

Nonpolarizing Electrodes for Intra-Cavitory Derivation
of Slowly Varying Potentials, by V. I. Bel'kevich, et al.
RUSSIAN, per, Fiziol Zhur SSSR imeni I. M. Sechenova,
Vol XLIX, No 3, 1963, pp 379-381.

*NASA TT F-199

Longitudinal-Transverse Bending of Stringer-Supported
Circular Cylindrical Stressed Skins, by D. Ye. Lipovskiy,
S. N. Kan.
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Ser Aviats Tekh,
No 1, 1963, pp 33-47.

*NASA TT F-194

Investigation of Electron Density Distribution in a
Crystal, by Yu. N. Shuvalov.
RUSSIAN, per, Vest Leningrad Univ, Ser Fiz i Khim,
Vol XIII, No 4, 1958, pp 36-44.

ATS RJ-4112

Scientific
Physics (Contd)

Application of a Cone-Shaped Heavy-Current Arc in
the Spectroanalysis of Powdered Samples, A. A. Gusev'nikov.
RUSSIAN, per, Zavod Lab, Vol XXIX, No 8, 1963,
pp 937, 938.

HB 6087

Scattering of Cascade Particles in Heavy Elements,
by S. Z. Belenky, B. I. Maksimov, 12 pp.
RUSSIAN, per, Zhur Eksper i Teoret Fiz, Vol XXII,
1952, pp 102-111. 9216867

AEC-Tr-6088

Thermodynamics of Dielectrics and the Molecular
Structure of Liquids, by M. I. Shakhparanov, 6 pp.
RUSSIAN, per, Zhur Fiz Khim, Vol XXXVII, No 5,
1963, pp 1169-1172. 9217203

AEC-Tr-6074

The Factors Influencing the Intensity of Spectral
Lines in Flames During Spectral Analysis, by
V. G. Alekseyeva, S. L. Mandel'shtam, 28 pp.
RUSSIAN, per, Zhur Tekh Fiz, Vol XVII, No 7, 1947,
p 765. 9216104

AEC-Tr-6071

New Method for the Electrolytic Recording of an
Image and Product for Carrying Out This Method, by
D. R. Eastman, F. Urbach, et al, 20 pp.
BELGIAN, Patent No 606,003, 1961.

OTS 62-20013

Methods and Results of Study of Warm Hypersonic
Flow by Means External to the Flow, by A. Auriol.
FRENCH, rpt, Technical Note T 8/62 by the Franco-
German Research Institute of St Louis, 1962, pp 5-21.

*Navy/NRL

On Stability Conditions: Application, by
R. Meynieux.
FRENCH, per, Comptes Rendus Academie Sciences,
Vol CCLIII, 1961, pp 372-375.

*Navy/APL J311

Plastic Deformation and Rupture of Uranium Single
Crystals in Tension at -196°C, by A. Lemogne,
P. Lacombe, 8 pp.
FRENCH, per, Journal of Nuclear Materials, Vol VIII,
1963, pp 116-125. 9216858

AEC-Tr-6184

Theory of Information and Advertising, by J. Klanfer.
FRENCH, per, Revue Francaise de Recherche Operationnelle,
Vol VI, No 22, 1962, pp 35-54.

Navy Tr 3701
APL T908

The Heat Removal System of the OECD High Temperature
Reactor Dragon, by H. W. Muller, H. Uschwa, 26 pp.
GERMAN, rpt. 9216100

AEC-Tr-5883

The Effect of Ion Bombardment on Metal Surfaces, by
Fritz Hilbert, 44 pp.
GERMAN, rpt, Jul 1962. 9217195

AEC-NP-Tr-1068

Scientific
Physics (Contd)

On the Setting of Photogrammetric Models Into the Principal Net, by G. Kupfer.
GERMAN, bk, Zur Einpassung Photogrammetrischer Modelle in das Landesnetz.

ACIC

New Solution of Differential Rectification With Application of Melava Analytical Plotter, by O. Weibrecht.
GERMAN, bk, Ueber Eine Neue Loesung der Differential-Entzerrung Unter Verwendung des Analytical Plotters von Melava.

ACIC

Measurement of the Contrast Transfer Function of X-Ray Intensifier Screens, by M. Hofert.
GERMAN, per, Acta Radiologica, Vol I, No 5, 1963, pp 1111, 1112.

*AERE-Harwell

On the Theory of the Elastic Aftereffect, by L. Boltzmann.
GERMAN, per, Akademie der Wissenschaften Wien Sitzungsberichte, Math-Naturwissenschaftliche Cl Zweite Abteilung, Vol LXX, No 3, 1874, pp 275-306.

*Navy/APL J310

Contribution to the Geometry of the Tonometer, by G. Strobl.
GERMAN, per, Albrecht von Graefes Archiv fuer Ophthalmologie, Vol CLXIV, 1962, pp 280-283.

Navy Tr 3699
APL T903

Nucleation During Precipitation in Metallic Mixed Crystals, by R. von Becker.
GERMAN, per, Annalen der Physik, Vol XXXII, 1938, pp 128-140.

*AEC

A New Torsional Pendulum for Research on Internal Friction in Metals, by Karl Bugardt, Hans Preisendanz.
GERMAN, per, Archiv fuer Eisenhuettenwesen, Vol XXXII, No 2, 1961, pp 113-122.

*Navy/APL J309

Tunnel Diode Rectilinear Amplifier Low Level Noise Input Stage in the UHF Region, by H. Rieck, R. Maurer, 24 pp.
GERMAN, per, Archiv der Elektrischen Uebertragung, Vol XV, No 11, 1961, pp 495-507.

ACSI I-3616
ID 2250321

Automatic Apparatus for the Gravimetric Measurement of Gas Sorption, Particularly for the Determination of Specific Surface Area and Pore Size, by G. Sandstode, R. Robens, 29 pp.
GERMAN, per, Dechma Monographien, Vol XLIV, 1962, pp 59-81. 9217207

AEC-NP-Tr-1064

Scientific
Physics (Contd)

An Electromagnetic Torsion Apparatus for the
Measurement of Internal Attenuation in Metals, by
F. X. Eder, H. Haefner.
GERMAN, per, Experimentelle Technik der Physik, Vol VII,
No 7, 1959, pp 280-286.

*Navy/APL J308

Acoustic Properties of Soft and Semihard Polyurethane
Foam Materials, by H. W. Paffrath, W. Schmidt, 16 pp.
GERMAN, per, Kunststoffe, Vol LII, No 10, 1962,
pp 599-603. 9217208

AEC-SC-T-514

Radiation Intensity of the He/Ne Laser as a Function
of Pressure and Mixture Ratio of Gases, by H. Boersch,
G. Herziger, 7 pp.
GERMAN, per, Physics Letters, Vol IV, No 3, 1963,
pp 191-195.

Navy Tr 3691
NRL 955

On the Elastic Aftereffect, Elastic Hysteresis and
Internal Friction, by K. Bennewitz.
GERMAN, per, Physikalische Zeitschrift, Vol XXV,
No 17, 1924, pp 417-431.

*Navy/APL J312

Microscopic Examination of Surfaces at High
Temperature, by R. Mitsche, S. Jeglitsch.
GERMAN, per, Radex Rundschau, No 2, 1963, pp 405-412.

BISI 3259

The Light Yield at the Excitation of Luminescent
Zinc Sulfide by β -Rays, by H. J. Born, N. Riehl, et al,
8 pp.
GERMAN, per, Z fuer Beihefte Zur Physikalischen, Vol I,
No 5, 1945, pp 154-158. 9216852

AEC-Tr-6081

On the Behavior of the 4f-Electrons in Some Rare Earth
Metals Under the Influence of Light, by Armin Tannhauser,
12 pp.
GERMAN, per, Z fuer Physik, Vol CLXX, 1962, pp 526-532.
9217210

AEC-UCRL-Tr-1001

Transformation of Heat and Temperature, by H. Ott.
GERMAN, per, Z fuer Physik, Vol CLXXV, No 1, 1963,
pp 7-104.

*AEC

Regarding the Theory of the Ludwig-Soret Effect, by
B. Bruzs.
GERMAN, per, Z fuer Physikalische Chemie, Vol CLVIIa,
1931, pp 422-434.

*AEC

The Measurement of Gamma Radiation With Thermoluminescent
Dosimeters, by Janos Felszerfalvi, Jozsef Patko, 11 pp.
HUNGARIAN, per, Magyar Tudomanyos Akademia Atommag
Kutato Intezeta Kozlemenyesek, Vol IV, No 3, 4, 1962,
pp 169-176.

Navy Tr 3690
NRL 954

Scientific
Physics (Contd)

A Measurement of the Mean Adsorption Time of Oil
Molecules by the Non-Linear Flow Method.
JAPANESE, per, Journal of the Vacuum Society of Japan,
Part I, Vol VI, No 8, 1963.

*FTD : T-64-9

A Measurement of the Mean Adsorption Time of Oil
Molecules by the Non-Linear Flow Method.
JAPANESE, per, Journal of the Vacuum Society of Japan,
Part II, Vol VI, No 10, 1963.

*FTD-TT-64-10

Miscellaneous

Miracle of Our Time, by B. V. Akhlibininskiy,
N. I. Khralenko. (DC-10196)
RUSSIAN, bk, Chudo Nashego Vremeni, Leningrad, 1963,
pp 1-140.

*JPRS

Cybernetics and Electronic Computer Technology, by
L. P. Drayzmer, 171 pp.
RUSSIAN, bk, Kibernetika i Elektronno-vychislitel'naya
Tekh, Moscow-Leningrad, 1962, pp 1-139.

JPRS 22799

Cybernetics Philosophical and Sociological Problems, by
I. Novik, 213 pp.
RUSSIAN, bk, Kibernetika--Filosofskiye i Sotsiologicheskiye
Problemy, Moscow, 22 Jun 1963, pp 1-207.

JPRS 22814

The Brain and Cybernetics, by A. V. Napaikov,
N. A. Chichvarina, 55 pp.
RUSSIAN, bk, Mozg i Kibernetika, Kiberneticheskiye Klyuchi
k Taynam Mozga, Moscow, 1963, pp 1-48.

JPRS 22822

Novosibirsk State University, 11 pp.
RUSSIAN, rpt, Novosibirskiy Gosudarstvennyy Universitet,
Novosibirsk, 1962, pp 1-19.

JPRS 22689

Novosibirsk Scientific Center, by B. V. Ivanov,
G. S. Migirenko, et al, 197 pp.
RUSSIAN, bk, Novosibirskiy Nauchnyy Tsentr, 18 Oct 1962,
pp 1-207.

JPRS 22678

On the Nature of Image: Mental Reflection in the Light
of the Ideas of Cybernetics, by V. S. Tyukhtin. (SF-2964)
RUSSIAN, bk, O Prirode Obraza, Psikhicheskoye Otrazheniy
v Svetе Idei Kibernetiki, Moscow, 1963, pp 3-123.

*JPRS

Scientific
Miscellaneous (Contd)

Subject Plan of the Publishing House of the Academy
of Sciences of the USSR for 1963.
RUSSIAN, bk, Tematiceskiy Plan 1963 Izdatelstva
Akademii Nauk SSSR, Moscow, 1962.

ACIC

Certain Classes of Games and Games for Automata,
by I. M. Gel'fand, I. I. Pyatetskii-Shapiro, et al,
9 pp.
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CLII, No 1,
1963, pp 845-848.

JPRS 22519

Research Work in Universities, by I. Mukhlonov,
P. Romankov, 8 pp.
RUSSIAN, np, Izvestiya, 6 Sep 1963, p 3.

JPRS 22448

Programmed Teaching of Chemistry, by S. G. Shapovalenko,
16 pp.
RUSSIAN, per, Khim v Shkole, Vol XVIII, No 5, 1963,
pp 18-27.

JPRS 22730

Characteristics of Contemporary Natural Science
Knowledge, by V. Siforov, I. Novik, 16 pp.
RUSSIAN, per, Kommunist, Vol XL, No 15, 1963,
pp 114-123.

JPRS 22526

The Construction of Communism and the Process of
Turning Science into a Direct Productive Force,
by N. Frolov, 14 pp.
RUSSIAN, per, Kommunist Moldavii, No 1, 1963,
pp 15-24.

JPRS 22862

On the Work of the Scientific Research Chemical
Engineering Institute, 5 pp.
RUSSIAN, per, Mestnaya Prom i Kudozhest Prom, No 12,
1962, pp 4, 5.

JPRS 22862

Patent Descriptions as a Source of Scientific-Technical
Information, by E. S. Orlovskiy, 9 pp.
RUSSIAN, per, Nauch-Tekh Informatsii, No 6, 1963, pp 6-9.

JPRS 22547

Summary of Recommended Rules in Field of Scientific
Publishing, 6 pp.
RUSSIAN, per, Nauch-Tekh Informatsii, No 6, 1963,
pp 10-12.

JPRS 22547

Cybernetics in Chemistry, by V. Kafarov, 5 pp.
RUSSIAN, np, Pravda, No 286, 13 Oct 1963, p 2.

JPRS 22645

Scientific
Miscellaneous (Contd)

Selected Articles From the Russian Periodical
Vest Ak Nauk SSSR, No 9, 1963.

JPRS 22584

Important Tasks for Latvian Scientists, by
K. K. Plaude, 5 pp, (pp 38-41).

Reorganization of the Academy of Sciences Turkmen
SSR, by Sh. B. Batyrov, 6 pp, (pp 45-48).

Problems of Ferromagnetism and Ferroelectricity,
by K. P. Belov, L. A. Shuvalov, 5 pp, (pp 82-84).

Problems of Modern Petrography, by Ye. K. Ustiyev,
6 pp, (pp 84-87).

Selected Articles From the Russian Periodical
Vest Vysshey Shkoly.

Vol XXI, No 6, 1963. JPRS 22460

Programmed Teaching: Exercises Based on the Use
of Technical Means, by M. K. Borodulina,
A. S. Lur'ye, 6 pp, (pp 27-30).

The Experience of Applying Teaching Algorithms,
by A. R. Belopol'skaya, 8 pp, (pp 31-34).

Vol XXI, No 7, 1963. JPRS 22673

Group Studies With the Use of Programmed Texts, by
V. T. Kulik, 6 pp, (pp 24-27).

More on the Organization of Scientific Work in the
Vuzes, by G. A. Nikolayev, 9 pp, (pp 34-40).

The Interest of Soviet Students in Latin America
is Growing by N. D. Diko, 5 pp, (pp 76-78).

Marxist-Leninist Gnosiology and the Problem of Sign
and Meaning, by M. B. Mitin, 13 pp.
RUSSIAN, per, Voprosy Filosofii, Vol XVII, No 6,
1963, pp 13-21.

JPRS 22825

A Review of Social Sciences and Communism, by
V. Zh. Kelle, M. Ya. Koval'zon, 12 pp.
RUSSIAN, per, Voprosy Filosofii, Vol XVII, No 6,
pp 161-167.

JPRS 22826

The Gnosiological Nature of Information Modelling,
by V. M. Glushkov, 9 pp.
RUSSIAN, per, Voprosy Filosofii, Vol XVII, No 10,
1963, pp 13-18.

JPRS 22518

Scientific
Miscellaneous (Contd)

Remarks on Account of a Criticism by M. A. Yurkina,
N. P. Makarov, V. F. Yeremeyer, by K. Arnold.
GERMAN, rpt, Bemerkungen zur Kritik von M. A. Yurkina,
N. P. Makarov, W. F. Jeremejew.

ACIC

Cybernetics in the Sciences, Engineering and Economy of
the German Democratic Republic, by Hermann Klare, 197 pp.
GERMAN, bk, Kybernetik in Wissenschaft, Tech und Wirtschaft
der DDR, Berlin, 1963, pp 1-186.

JPRS 22931

The Suitability and Application of Novel Powder Bases,
by H. von Czetsch-Lindenwald, 19 pp.
GERMAN, per, Die Pharmazeutische Industrie, No 18, 1956,
pp 133-136.

Patent Office

Epstein's Comments on Communist China, 5 pp.
HEBREW, np, Kol Haam, 11 Nov 1963, pp 2, 3.

JPRS 22558

Future Development of Scientific Qualification and
the Training of Aspirants, by Gabor Tolnai, 8 pp.
HUNGARIAN, per, Magyar Tudomany, Vol VIII, No 9, 1963,
pp 573-577. (Table of Contents)

JPRS 22788

Dialogues Concerning Two New Sciences, by
Galileo Galilei.
ITALIAN, bk, 288 pp.

McGraw-Hill Bk Co

A Kite Made of the Leaf of Artocarpus in Tobi, by
Tokuzo Uehara.
JAPANESE, per, Science of the South Seas, Vol IV,
No 2, 1941, pp 63, 64.

Dept of Interior
209(900) qUn33pr
No 370

On the Estimation of Age of Writing by Measuring
the Color of Blue-Black Ink 11, by Shuichi Ikanri,
Yasuo Inamura, 18 pp.
JAPANESE, per, Kagaku Keisatsu Kenkyusho Hokoku,
Vol XVI, No 1, Mar 1963, pp 74-82.

JPRS 22457

Estimation of the Age of Writing in Blue-Black
Ink 111, by Yukie Kikuchi, 8 pp.
JAPANESE, per, Kagaku Keisatsu Kenkyusho Hokoku,
Vol XVI, No 1, Mar 1963, pp 83-86.

JPRS 22457

On the Constancy of Form as Revealed in the
Handwriting Analysis, by Takeo Matsukawa, 22 pp.
JAPANESE, per, Kagaku Keisatsu Kenkyusho Hokoku,
Vol XVI, No 1, Mar 1963, pp 87-96.

JPRS 22457

New Members of the Polish Academy of Sciences, 21 pp.
POLISH, per, Nauka Polska, Vol X, No 5, 1962, pp 138-149.

JPRS 22733

Scientific
Miscellaneous (Contd)

Automation of Railroads in the USSR, by
Gheorghe Stefaniu, 7 pp.
RUMANIAN, np, Lupta Caile Ferate Romine, 7 Nov 1963,
p 4.

JPRS 22423

Pedagogy and Cybernetics, by Stanciu Stoian, 13 pp.
RUMANIAN, per, Revista de Pedagogie, Vol XII, No 10,
1963, pp 5-14.

JPRS 22717

Evaluation of the Effectiveness of Rumanian Scientific
Research, by D. Dumitrescu, 7 pp.
RUMANIAN, np, Scinteia, No 6103, 11 Dec 1963, p 2.

JPRS 22546

Conference on Study and Application of Micro-Elements,
by V. A. Kapitanchuk, 12 pp.
UKRAINIAN, per, Dopovidi Ak Nauk Ukrain RSR, No 9, 1963,
pp 1265-1267.

JPRS 22448

INFORMATION RECEIVED DURING JANUARY
ON COVER-TO-COVER TRANSLATIONS

Atomnaya Energiya, Vol XIII, No 6, 1962.	CB
Atomnaya Energiya, Vol XIV, No 1, 1963.	CB
Avtomatika i Telemekhanika, Vol XXIV, No 5-7, 1963.	ISA
Byulleten' Eksperimental'noi Biologii i Meditsiny, Vol LIV, No 11, 1962.	CB
Doklady Akademii Nauk SSSR, Vol CXLVIII, No 1-6, 1963.	CB
Doklady Akademii Nauk SSSR, Vol CLI, No 1-3, 1963.	Amer Inst of Phys Sov Phys - Dok Vol VIII, No 7
Fizika Tverdogo Tela, Vol V, No 7, 1963.	Amer Inst of Phys Sov Phys-Solid State Vol V, No 7
Fiziologiya Rastenii, Vol VIII, No 2-6, 1961.	AIBS
Geokhimiya, No 3, 1963.	Scripta Technica
Inzhenerno-Fizicheskiy Zhurnal, Vol VI, No 5, 1963.	JPRS 22553
Inzhenerno-Fizicheskiy Zhurnal, Vol VI, No 7, 1963.	JPRS 22715
Inzhenernyy Zhurnal, Vol III, No 3, 1963.	JPRS 22567
Izmeritel'naya Tekhnika, No 6, 7, 1963.	ISA
Izvestiya Akademii Nauk SSSR, Otdelenie Khimicheskikh Nauk, No 2, 1963.	CB
Izvestiya Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk, Tekhnicheskaya Kibernetika, No 5, 1963.	JPRS 22648
Izvestiya Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk, Tekhnicheskaya Kibernetika, No 6, 1963.	*JPRS
Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol XXVII, No 1, 1963.	CTT
Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, No 8, 1963.	AGU
Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, No 3, 1961. 9690502	FTD-TT-62-1111

Izvestiya Vysshikh Uchebnykh Zavedeniy MViSSO SSSR, Seriya Aviatsionnaya Tekhnika, No 2, 1963.	JPRS 22668
Izvestiya Vysshikh Uchebnykh Zavedeniy, Seriya Aviatsionnaya Tekhnika, No 3, 1963.	JPRS 22703
Izvestiya Vysshikh Uchebnykh Zavedeniy, Priborostroyeniye, Vol VI, No 3, 1963.	JPRS 22864
Izvestiya Vysshikh Uchebnykh Zavedeniy, Radiofizika, Vol VI, No 3, 1963.	JPRS 22922
Kosmicheskiye Issledovaniya, Vol I, No 2, 1963.	*PTD-TT-64-42
Kosmicheskiye Issledovaniya, Vol I, No 3, 1963.	*PTD-TT-64-90
Kristallografiya, Vol VIII, No 3, 1963.	Amer Inst of Phys Sov Phys - Crystal Vol VIII, No 3
Mikrobiologiya, Vol XXXII, No 1, 1963.	CB
Optika i Spektroskopiya, Vol XV, No 3, 4, 1963.	OSA
Pochvovedeniye, No 7, 8, 1962.	Scripta Technica
Pribory i Tekhnika Eksperimenta, No 3, 1963.	ISA
Radiokhimiya, Vol IV, No 2, 1962.	CB
Teoriya Veroyatnosti i Yeye Primeniya, Vol VIII, No 1, 1963.	SIAM
Tsvetnye Metally, Vol III, No 8, 1962.	PS
Vestnik Akademii Meditsinskikh Nauk SSSR, Vol XVIII, No 11, 1963.	JPRS 22711
Vestnik Svyazi	
No 10, 1963.	JPRS 22699
No 11, 1963.	JPRS 22911
No 12, 1963.	*JPRS
Voyennyy Vestnik, No 9, 1963. 9690343	ACSI I-1614-I ID 2201421
Voyennyy Vestnik, No 10, 1963.	ACSI I-1614-J ID 2201421
Zavodskaya Laboratoriya, Vol XXIX, No 5-7, 1963.	ISA

Zhurnal Eksperimental'noi Teoreticheskoi Fiziki,
Vol XLIV, No 6, 1963.

Amer Inst of Phys
Sov Phys - JETP
Vol XVII, No 6

Zhurnal Obshchei Khimii, Vol XXXIII, No 2, 1963.

CB

Zhurnal Prikladnoi Khimii, Vol XXXVI, No 2, 1963.

CB

Zhurnal Tekhnicheskoi Fiziki, Vol XXXIII, No 7, 1963.

Amer Inst of Phys
Sov Phys - Tech Phys
Vol VIII, No 7

* In Process

** Table of contents not available.

Table of contents follows for the above cover-to-cover translations.

SOVIET ATOMIC ENERGY

A translation of ATOMNAYA ÈNERGIYA
A publication of the Academy of Sciences of the USSR

• 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Vol. 13, No. 6

(Russian Original Dated December, 1962)

November, 1963

CONTENTS

	P	A	G	E
	ENG.		RUSS.	
Equilibrium of a Toroidal Pinch in a Magnetic Field. V. D. Shafranov	1149		521	
Calculation of the Spectra of Fission Neutrons, Emitted at Angles of 0, 45, and 90° to the Direction of Flight of the Fragments. E. I. Sirotinin :	1159		530	
Methods for Calculating Slow Neutron Spectra. G. I. Marchuk, V. F. Turchin, V. V. Smelov, and G. A. Ilyasova	1163		534	
Measurement of Neutron Spectra in Uranium-Water and Uranium-Monochloropropylidiphenyl Lattices. V. I. Mostovoi, V. S. Dikarev, M. B. Egiazarov, and Yu. S. Saltykov	1176		547	
Calculation of Neutron Diffusion in Periodic Lattices. G. Ya. Rumyantsev	1186		558	
Three-Group Method for Thermalisation in a Heterogeneous Reactor Cell. L. V. Maiorov and M. S. Yudkevich	1193		563	
The Absorption of γ -Radiation in Infinite Lattice Systems. B. M. Terent'ev, V. A. El'tekov, and Yu. S. Ryabukhin	1199		568	
Heats of Formation of UF_6 and U_3Fe . M. I. Ivanov and N. S. Podol'skaya	1203		572	
Radioactive Tungsten in the Atmosphere. B. V. Kurchatov, V. N. Lavrenchik, and V. M. Shubko	1206		576	
LETTERS TO THE EDITOR				
Electrostatic Channel for Injecting Ion Beams into a Magnetic Trap. V. A. Belyaev and N. N. Brevnov	1211		581	
Neutron Spectra from Po-Be and Ra-Be Sources. L. Medveczky	1214		583	
Analysis of Excitation Functions of Levels of the Fe^{56} Nucleus in Inelastic Scattering of Neutrons in the Optical Model of the Nucleus. D. A. Kardashev, V. S. Stavinskii, D. L. Broder, A. I. Lashuk, and I. P. Sadokhin	1218		587	
Alignment Nomograms for the Relationship between Emission Angles of Nuclear Reaction Products. G. N. Potetyunko	1220		588	
Half-Life of Cs^{137} . D. G. Fleishman, I. V. Burovina, and V. P. Nesterov	1224		592	
Calculating Gamma Buildup Factors in Heterogeneous Media. D. L. Broder, Yu. P. Kayurin, and A. A. Kutuzov	1226		593	
Techneium Buildup in Thermal Reactors. B. S. Kir'yannov, A. P. Smirnov-Averin, and V. I. Gal'kov	1228		595	
The Affinity of Niobium for Oxygen. G. A. Meerson and T. Segorcheanu	1230		597	

(continued)

Available From CB

CONTENTS (continued)

ATOMNAYA ENERGIYA, Vol. XIII, No. 6, 1962.

	RUSS. PAGE
A Study of the Isotopic Ratio U^{234}/U^{238} in Aqueous Extracts from Uranium-Phosphate-Zirconium Ores in Connection with Their Origin. M. G. Syromyatnikov and I. I. Tolmachev	1233 600
 NEWS OF SCIENCE AND TECHNOLOGY	
1962 Scientific Conference of the Moscow Engineering and Physics Institute (MIFI)	1236 603
International Symposium on Radiation Damage in Solids and Reactor Materials. E. L. Andronikashvili	1241 606
Symposium on Radiation Effects on Matter. N. F. Pravdyuk, Yu. N. Pokrovskii, and P. A. Platonov	1244 608 [U. S. Nuclear Industry Policy, Source: Nucleonics. 20, 5, 17 (1962).]
Soviet Exhibit of Radiation Shielding and Protection Equipment for Handling Radioactive Materials	1246 611
Exhibit of the Polish "Elektrim" Society	1249 614
The RAL-1 Type Scintillation Alpha-Radiometer. A. L. Yakubovich	1251 615
New Slow-Neutron Corona Counters	1253 617
Brief Communications	1255 618
 BIBLIOGRAPHY	
Universal Decimal System of Literature Classification. G. L. Smolyan	1256 620
New Literature	1261 623
Author Index, Vols. 12 and 13, Nos. 1-6	1273
Tables of Contents, Vols. 12 and 13, Nos. 1-6	1277

Available From CB

SOVIET ATOMIC ENERGY

*A translation of ATOMNAYA ENERGIYA
A publication of the Academy of Sciences of the USSR*

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Vol. 14, No. 1

December, 1963

CONTENTS

	P A G E
	ENG. RUSS.
Editor's Note	1 3
Igor' Vasil'evich Kurchatov - I. K. Kikoin	3 5
I. V. Kurchatov and Nuclear Reactors - V. V. Goncharov	7 10
Spontaneous Fission and Synthesis of Far Transuranium Elements - G. N. Flerov, E. D. Donets, and V. A. Druin	14 18
Investigation of Properties of μ -Mesic Atoms and μ -Mesic Molecules of Hydrogen and Deuterium at the Dubna 680-MeV Synchrocyclotron - V. P. Dzhelepov	22 27
Longitudinally Polarized Proton Beam in the 85-Meter Synchrocyclotron - M. G. Meshcheryakov, Yu. P. Kumeikin, S. B. Nurushev, and G. D. Stolctov	33 38
On the Theory of Rotational Spectra - A. Bohr and B. R. Mottelson	36 41
On Delayed Protons - N. A. Vlasov	40 45
The Isotope Effect in Elastic Scattering of Protons on Nuclei - A. K. Val'ter and A. P. Klyucharev	43 48
Collective Interactions and the Production of a High-Temperature Plasma - E. K. Zavoiskii	51 57
British Research in Controlled Thermonuclear Fusion - Sir John Cockcroft	59 66
Cyclotron Instability in Ogra - V. I. Pistunovich	63 72
Screw and Flute Instabilities in a Low-Pressure Plasma - B. Lehnert	72 82
The Initial Stages of the Evolution of the Universe - Ya. B. Zel'dovich	83 92
The Age of Nuclei and the Nuclear Synthesis Time - V. A. Davidenko	92 100
Causality in Present-Day Field Theory - D. I. Blokhintsev	97 105
Lobachevskian Kinematics and Geometry - Ya. A. Smorodinskii	102 110
Electrokinetic Effects in Liquid Mercury - A. R. Regel' and S. I. Patyanin	114 122
 BIBLIOGRAPHY	
Bibliography of the Published Works of Academician I. V. Kurchatov	120 128

Available From CB

Automation and Remote Control

A translation of Avtomatsika i Telemekhanika, a publication of the Academy of Sciences of the USSR

Vol. 24, No. 5

(Russian Original Dated May, 1963)

November, 1963

CONTENTS

	PAGE	RUSS. PAGE
Methods for Solving Variational Problems. II. Sliding Regimes. <u>V. F. Krotov</u>	539	581
Study of the Stability of Controlled Systems, Taking the External Load of a Hydraulic Actuator into Consideration. <u>B. Zh. Maigarin</u>	554	599
A Method of Stabilizing Third-Order Control Systems with Large Gains. II. <u>E. A. Barbashev and V. A. Tabueva</u>	562	608
On a Method of Controlling a Certain Class of Objects with Varying Parameters. <u>M. A. Berman and S. V. Emel'yanov</u>	568	615
Multiloop Combined Control Systems. <u>M. V. Meirov</u>	580	628
On the Structural Stability of Single-Loop Control Systems of Normal Type. <u>E. S. Pyatnitskii</u>	590	640
Detection of a Random Signal Received along Several Channels with Independent Noises. <u>L. P. Sysoev</u>	599	649
An Accurate Design Method for Semiconductor Switching Circuits Used in Industrial Automation. <u>S. N. Domanitskii and I. V. Ptangishvili</u>	606	657
Magnetic Time-Lag Element Based on the Counting of Pulses of Unlike Polarity. <u>M. M. Lotosh</u>	614	666
Contactless Relay Using Transistors. <u>K. A. Brusilovskii and S. Yu. El'kind</u>	621	675
Magnetic Generator for Infra-Low and Low-Frequency Harmonic Oscillations. <u>V. I. Orlov</u> ..	627	683
Synthesis of an Optimal System in the Presence of Noise with the Correlation Function $R_{\eta}(r) = \delta^2 \exp(-a r)$ and of Signal in the Form of a Polynomial with an Arbitrary Number of Terms. <u>B. N. Dobzhinskii</u>	633	690
Radio Relaying of Signals along a Column of Drilling Pipes as a Channel of Communication with the Drilling Face. <u>B. A. Giachev and A. I. Leonov</u>	635	692
Semiconductor Diodes as Temperature Data Transmitters. <u>I. L. Rotbert and N. P. Udalov</u> ..	639	696
BIBLIOGRAPHY		
Literature on the Theory of Switching Devices and Finite Automata (1958-1960). <u>V. D. Kazakov and O. P. Kuznetsov</u>	642	699
LETTERS TO THE EDITOR		
Regarding the Paper "Methods of Minimization and Design of Bridge Relay Circuits" (in Collected Papers on "Automatic Regulation and Control" Published by the Academy of Sciences, USSR, 1961). <u>V. P. Didenko</u>	651	713

Available From ISA

Automation and Remote Control

A translation of Avtomatika i Telemekhanika, a publication of the Academy of Sciences of the USSR

EDITORIAL BOARD OF AVTOMATIKA I TELEMEKHANIKA

D. I. Ageikin	V. A. Il'in	A. Ya. Lerner	A. A. Tal'
M. A. Aizerman	A. G. Israelyan	A. M. Letov	(Corresp. Secretary)
A. B. Chelyustkin (Assoc. Editor)	V. V. Karibskii	(Assoc. Editor)	V. A. Trapessnikov (Editor in Chief)
E. G. Dudnikov	A. V. Kharlamov	V. S. Malov	Ya. Z. Tsypkin
N. Ya. Festa	B. Ya. Kogan	B. N. Petrov	G. M. Ulanov
	V. S. Kuleshkin	Yu. P. Portnov-Sokolov	A. A. Voronov
	S. A. Lebedev	B. S. Sotsakov	S. V. Yablonskii

Vol. 24, No. 6

(Russian Original Dated June, 1963)

November, 1963

CONTENTS

	PAGE	RUSS. PAGE
Absolute Stability of Nonlinear Control Systems in Critical Cases. II. <u>V. A. Yakubovich</u>	656	717
On Critical Cases in the Theory of Absolute Stability of Controlled Systems. <u>M. A. Aizerman and F. R. Gantmakher</u>	669	732
The Analytical Design of Controls Based on Electronic Analog Devices. <u>Yu. M. Kepin and V. I. Tret'yakov</u>	674	738
A Variational Approach to the Problem of Invariance of Automatic Control Systems. I. <u>L. I. Rozonoer</u>	680	744
On Optimal Processes in Coupled Systems. <u>R. Gabasov and F. M. Kirillova</u>	692	757
Synthesis of Optimum Compensation According to the Servosystem Input Signal. <u>V. I. Ivanenko</u>	699	784
Recognition Algorithms. <u>I. Ya. Levin and L. B. Sapozhnikov</u>	704	788
Pattern Recognition Using Generalized Portraits. <u>V. N. Vapnik and A. Ya. Lerner</u>	709	774
Example of a Problem in the Joint Behavior of Two Automata. <u>V. L. Stefanyuk</u>	718	781
The Dynamics of a Continuous Automatic Optimizer for One Class of Systems. <u>A. A. Belen'kii and A. B. Chelyustkin</u>	720	785
Servosystem Correction by Means of Digital Differential Analyzers for the Case of Statistical Inputs. <u>Yu. V. Kovachich</u>	735	799
Pulse Generators of Stable Frequency. <u>V. A. Il'in</u>	744	808
Error-Correcting Codes with Non-Binary Alphabet in Frequency Remote-Control Systems. <u>A. G. Mamikov and T. L. Sletova</u>	750	815
Unreliability Losses in Systems for Transmission of Independent Local Information with Various Failure Detection Methods. <u>G. A. Shastova</u>	754	820
The Reliability of Information Net. <u>V. A. Zhezhikashvili and Yu. I. Shmukler</u>	758	824
Electrical Function Generator of the Pulse-Spectrum Type. <u>V. B. Smolov and E. P. Uglyumov</u>	764	830
On the Absolute Stability of Nonlinear Third-Order Automatic Control Systems. <u>B. Zh. Maigarin</u>	772	839
Time-Analytical Description of Operation of Logical Elements. <u>G. M. Proskurin</u>	778	844
Specialized Electronic Computer for the Correlation and Spectral Analysis of Random Processes, with Input Data Presented in Visual Form or on Magnetic Tape. <u>T. I. Bartkus, I. I. Gikis, F. P. Lapienis, S. K. Lukoshevichyus, V. V. Meshcheryakov, and L. A. Tel'kenis</u>	784	850
EVENTS		
International Symposium on the Theory of Switching Circuits and the Theory of Finite Automata. <u>V. D. Kazakov</u>	790	856

Available From ISA

Automation and Remote Control

A translation of Avtomatika i Telemekhanika, a publication of the Academy of Sciences of the USSR

EDITORIAL BOARD OF AVTOMATIKA I TELEMEKHANIKA

D. I. Ageikin	V. A. Il'in	A. Ya. Lerner	A. A. Tal'
M. A. Alberman	A. G. Isufyan	A. M. Letov	(Corresp. Secretary)
A. B. Chelyutkin (Assoc. Editor)	V. V. Karibekii	(Assoc. Editor)	V. A. Trapeznikov (Editor in Chief)
E. G. Dudnikov	A. V. Khranov	V. S. Malov	Ya. Z. Tsyplkin
N. Ya. Festa	B. Ya. Kogan	B. N. Petrov	G. M. Ulanov
	V. S. Kulabakin	Yu. P. Por'nev-Sokolov	A. A. Voronov
	S. A. Lebedev	B. S. Sotskov	S. V. Yablonskii

Vol. 24, No. 7

(Russian Original Dated July, 1963)

December, 1963

CONTENTS

	PAGE	RUSS. PAGE
A Variational Approach to the Problem of Invariance. <u>L. I. Rozonoer</u>	793	861
Synthesis of Controlled Systems and the Alternative Nature of the Solutions of a Class of Degenerate Variational Problems. I. <u>A. V. Gorban'</u>	801	871
On the Stability of a Variable-Structure Control System when the Sliding Conditions Are Violated. <u>E. A. Barbashin, V. A. Lubnaya, and R. M. Eidinov</u>	810	882
Feedback Control Systems with Contrary Interests. <u>V. N. Stikhin</u>	817	891
Optimum Control of Linked Discrete Systems. <u>R. Gabasov and F. M. Kirillova</u>	825	900
On the Stability of Sampled-Data Systems. <u>J. Tschauer</u>	831	906
Use of Linear Programming Methods for Synthesizing Sampled-Data Automatic Systems. <u>A. I. Propoi</u>	837	912
Methods for Calculating and Synthesizing Sampled-Data Automatic Systems. I. <u>E. G. Gol'shtein and D. B. Yudin</u>	846	921
Determination of Dynamic Characteristics of Non-Stationary Systems during Their Normal Operation. <u>M. R. Elistratov</u>	852	929
Effect of External Noise on a Phase-Locked Oscillator. <u>K. B. Chelyshev</u>	863	942
A Method of Design of Adaptive, Automatic-Control Systems with the Stabilization of Frequency Characteristics. <u>V. M. Bozhukov and V. I. Kukhtenko</u>	869	950
One Algorithm for Solution of Boundary-Value Problems. <u>R. I. Stakhovskii</u>	879	962
Games between Automata. <u>V. Yu. Krylov and M. L. Tsetlin</u>	889	975
Pulse Simulation of Multi-Loop Systems. <u>I. M. Burshtein</u>	900	988
Transfer Function of a Self-Saturating Magnetic Amplifier with a Dc Resistive- Inductive Load for a Harmonic Input Signal. <u>E. L. L'vov</u>	908	997
The Transient Response of a Second-Harmonic Phase-Detector. <u>N. S. Pilipenko and L. A. Sintekii</u>	919	1010
One Problem in Mathematical Programming. <u>O. V. Golovanov</u>	924	1015
David Yakovlevich Libenson	927	1019

Available From ISA

BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE

A translation of BYULETEN' EKSPERIMENTAL'NOI
BIOLOGII I MEDITSINY

A publication of the Academy of Medical Sciences of the USSR
Russian Original Dated November, 1962

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Vol. 54, No. 11, pp. 1183-1306

November, 1963

CONTENTS

	P A G E
	ENG. RUSS.
PHYSIOLOGY	
Experimental Analysis of the Epileptic Discharges Arising during Electrical Stimulation of the Hippocampus — A. I. Shumilina and N. A. Ivanova	1183 3
Changes in the Electrical Activity of the Rabbit's Cerebral Cortex Resulting from Exposure to a UHF Electromagnetic Field. Report 1. The Effect of a UHF Field on the Electroencephalogram of Intact Rabbits — Yu. A. Kholodov and Z. A. Yanson	1188 3
Formation of a Spinal Cord Dominant during the Action of a Constant Current on an Afferent Nerve — F. D. Sheikhov	1192 13
Functional Relationships between the Respiratory Muscles and Muscles Performing Dynamic Work — A. M. Kulik	1197 17
Static Characteristics of the Blood Vessels of the Kidneys and Limbs — V. M. Khayutin	1202 22
Concentration of ACTH in the Hypophysis of Ram at Different Ages — L. N. Blok	1206 26
PATHOLOGICAL PHYSIOLOGY AND GENERAL PATHOLOGY	
The Mechanism of Excitation of the Respiratory Center during Pathological Changes in the Lungs — Z. N. Sergeeva, T. I. Goryunova, and S. I. Frankshtain	1210 30
The Physiological Anticlotting System after Acute Blood Loss — D. M. Zubairov	1214 33
The Mechanism of the Eosinopenic Reaction in Terminal States — M. G. Kolpakov, K. G. Potekhin, and V. I. Fedenkov	1217 36
Connection between the Increased Fibrinogen Concentration in Dogs with Radiation Sickness and the Fibrinogenase Activity — K. V. Gordeeva	1221 39
Treatment of Blood Transfusional Shock Superimposed on the Action of Neuroleptic Drugs — L. Ya. Fishchenko and E. M. Neiko	1224 42
The Effect of Partial Pancreatectomy on the Electrocardiogram in Dogs — L. N. Zefirov	1228 46
BIOCHEMISTRY AND BIOPHYSICS	
Investigation of Local Radiation Injuries in DNA by the Method of Thermal Separation of Spirals — N. I. Ryabchenko, P. I. Tseitlin, and A. G. Yaskevich	1232 51 <small>(continued)</small>

Available From CB

CONTENTS (continued)

	P A G E
	ENG. RUSS.
The Effect of Cystamine on Oxidative Phosphorylation in the Spleen of Irradiated Albino Rats — V. G. Vladiimirov	1236 55
Distribution of Potassium and Sodium in the Heart of Various Animals — V. S. Sal'manovich	1239 58
Characteristics of the Lipolytic Activity of Fatty Tissue — N. K. Davtyan	1244 63
Cholesterol Metabolism in Experimental Lead Poisoning — G. S. Konikova	1246 65
The Effect of the Serum of Immunized Guinea Pigs on the Multiplication and Catalase Activity of Mycobacterium Tuberculosis — R. I. Shenderova and A. M. Vitrinskaya	1248 68
PHARMACOLOGY	
The Effect of the Magnesium-Diisodium Salt of EDTA on Experimental Ventricular Arrhythmias in Dogs — E. I. Gendenshtain and L. A. Karskaya	1252 72
Tolerance of Mice at Different Ages to Muscarine- and Nicotine-Like Cholinolytics — V. B. Prozorovskii	1256 76
MICROBIOLOGY AND IMMUNITY	
The Physiological Mechanisms of Immunity to Tuberculosis. Report 1. The Effect of Vaccination against Tuberculosis on Leukocyte Reactions to Parenteral Milk Injection — E. L. Kan	1259 80
The Relationship between Algae and Microorganisms. Report 3. Effect of the Algae <i>Chlorella vulgaris</i> and <i>Scenedesmus obliquus</i> on the Survival of Bacteriophages to <i>Salmonella typhimurium</i> — N. V. Davydova, V. V. Pospelova, and M. M. Telichenko .	1263 84
EXPERIMENTAL BIOLOGY	
Regenerative Hypertrophy of the Pancreas in Guinea Pigs — G. V. Segida	1267 88
Morphological and Histochemical Changes in the Connective Tissue of the Skin of New-Born Albino Rats from Mothers with Pancreatic Dysfunction — V. P. Zhuk	1272 92
The Daily Rhythm of Mitotic Activity in Mice on a Modified Feeding Program — N. V. Krasil'nikova	1275 95
A Histochemical Study of the Proteins of Procollagen Fibers in Regenerating Connective Tissue — S. G. Kolaeva	1278 98
Some Kinetic Principles of Erythropoiesis — A. D. Strazhishovskii	1282 102
MORPHOLOGY AND PATHOMORPHOLOGY	
Normal Indices of the Peripheral Blood and Bone Marrow for the Monkey <i>Macacus rhesus</i> — I. N. Usacheva and N. V. Raeva	1285 106
Changes in the Lung with an Aseptic or Infected Inflammatory Focus Following Ligation of the Pulmonary Artery — N. V. Boikova	1288 109
METHODS	
The Use of Hall's EMF Pick-Up in Experimental Physiology — A. P. Koryagin, Yu. A. Labas, and A. S. Mirkin	1293 114
A Simple Densitometer for Paper Electrophoresis — A. A. Strekalov	1298 118
Formation of an Isolated Gastric Pouch on the Anterior Wall by a Modification of A. M. Ugolev's Method — V. V. Zolotov	1302 122

Available From CB

DOKLADY PHYSICAL CHEMISTRY

PROCEEDINGS OF THE
ACADEMY OF SCIENCES
OF THE USSR

A translation of DOKLADY AKADEMII NAUK SSSR

A publication of the Academy of Sciences of the USSR

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Volume 148, Numbers 1-6

January-February, 1963

CONTENTS

RUSS. PAGE	RUSS. ISSUE	PAGE
------------	-------------	------

Investigation of Organotin Compounds by the Method of Mössbauer Resonance			
Absorption of γ -Quanta — A. Yu. Aleksandrov, N. N. Delyagin, K. P. Nitrofanov, L. S. Polak, and V. S. Shpinel'	1	1	126
Mechanochemical Transformations in Macromolecules at 80°K			
— P. Yu. Butyagin	4	1	129
Electrochemical Oxidation of Formic Acid and Its Salts on a Rotating Platinum Electrode — Yu. B. Vasil'ev and V. S. Bagotskil	7	1	132
Frequency of Autooscillations in Electrolytic Systems — A. Ya. Gokhshtein	10	1	136
The Radiochemical Oxidation of Potassium Ferrocyanide in Aqueous Solution			
— A. V. Egunov and P. I. Dolin	14	1	140
Calculation of the Single-Step Separation Coefficients of Certain Exchange Reactions — E. M. Kuznetsova, Z. V. Gryaznova, and G. M. Panchenkov	18	1	144
The Role of the Original Protective Film in the Oxidation of a Metal in Aqueous Solution — L. Lepin' and A. Lokenbakh	22	1	148
The Ionization of Oxygen on Palladium — Yu. A. Mazitov, K. I. Rozental'	26	1	152
Regularities of the Transition from Self-Inflammation to Ignition — A. G. Merzhanov, V. G. Abramov and V. T. Gontkovskaya	29	1	156
Surface Properties of CaF_2 -Based Melts — Yu. P. Nikitin, V. G. Korpachev and S. N. Safronnikov	33	1	160
Two-Dimensional Pressure, and the Capacity to Reduce the Evaporation of Water, of Monolayers of Mixtures of Normal and Secondary Hexadecanols			
— A. A. Trpeznikov and V. A. Ogarev	35	1	162
The Ferromagnetism of Organic Structures — L. A. Blyumenfel'd	39	2	361
Ferrites of the $\text{MgO}-\text{MnO}_2-\text{Fe}_2\text{O}_3$ System Containing Added Sc_2O_3 — D. E. Bondarev and Yu. V. Basikhin	43	2	365
Rubberlike Elasticity. Shear Strength and Development of a Steady Viscous Flow in Fluid Polymers — G. V. Vinogradov, I. M. Belkin, and V. A. Kargin	47	2	369
The Effect of Impurities on the Vibrational Excitation of Molecular Oxygen at High Temperatures — N. A. Generalov	51	2	373
A New Type of Hydrogen Exchange During the Photolysis of Some Organic Compounds — M. G. Kuz'min and I. V. Berezin	55	2	377

(continued)

Available From CB

CONTENTS (continued)

	RUSS. PAGE	RUSS. ISSUE	RUSS. PAGE
Hot-Spot Explosion — A. G. Merzhanov, V. V. Batzykin, and V. T. Gontkovskaya	58	2	380
The Association Effect of Polybutadiene Macromolecules in Various Solvents — I. Ya. Poddubnyi, E. G. Èrenburg, E. P. Chernova-Ivanova and G. G. Kartasheva	62	2	384
The Formation of Excited Formaldehyde Molecules During Low-Temperature Oxidation of Acetaldehyde — V. F. Shuvalov, R. F. Vasil'ev, L. M. Postnikov, and V. Ya. Shlyapintokh	65	2	388
On the Mechanism of Conduction in Organic Semiconductor Polymers — A. V. Afrapetyants, R. M. Voitenko, B. È. Davydov, and B. A. Krentsel'	68	3	406
The Additivity of Free Energies of Activation of Gaseous Free Radical Reactions — I. V. Berezin	72	3	409
The Influence of the Radioactive Radiation of Na_2WO_4 and Na_2SO_4 On the Phase Changes Undergone by These Compounds — I. E. Mikhailenko and V. I. Spitsyn	75	3	413
The Dissolution and Passivation of Titanium in Sulfuric Acid With Polarization by Alternating Current — Yu. N. Mikhailovskii	79	3	417
The Kinetics of Photoconductivity in Acetylenic Polymers — V. S. Myl'nikov	82	3	420
How the Crystal Structure of Isotactic Polymethyl Methacrylate Shows up in Infrared Absorption Spectra — V. N. Nikitin and N. V. Mikhailova	85	3	424
The Compensation Effect in the Electrical Conductivity of Crystalline Polymeric Dielectrics — B. I. Sazhin and N. G. Podosenova	88	3	427
The Effect of Cadmium Ions on Adsorption of Hydrogen on a Palladized Platinum Electrode — D. V. Sokol'skii, N. A. Zakarina and G. D. Zakumbaeva .	90	3	430
Photochemical and Radiation-Chemical Reduction of Silver Perchlorate in the Presence of Organic Substances — I. S. Shchegoleva, A. V. Egunov, T. S. Gilkman, and V. Ya. Dain	93	3	433
Potentiometric Measurements in Various Media — S. T. Bezverkhova, A. T. Luk'yanov, and D. V. Sokol'skii	96	4	438
The Effect of the Radioactivity of Molybdenum Anhydride on the Specific Surface Area — I. E. Zimakov, N. P. Dobrosl'skaya, and V. I. Spitsyn	99	4	444
Effect of Low-Molecular Substances Sorbed by Supramolecular Structures on the Mechanical Properties of Rigid-Chain Polymers — P. V. Kozlov, V. G. Timofeeva, and V. A. Kargin	101	4	446
Wustite Decay Kinetics — O. K. Shabalina and G. I. Chufarov	104	4	450
The Entropy of Systems of Scarcely Distinguishable Components — Yu. S. Varshavskii and A. B. Sheinin	107	5	459
A Possible Cause for the Doublet Component Asymmetry in the Mössbauer Absorption Spectrum of Some Powdered Tin Compounds — S. V. Karyagin	110	5	462
The Depassivating Action of Halide Ions of Iron Based Alloys — Ya. M. Kolotyrkin, G. V. Goiovina, and G. M. Florianovich	113	5	466
Rapid Microanalysis of the Chemical Elements by the Moving Boundary Method — B. P. Konstantinov and O. V. Oshurkova	117	5	470
The Effect of Fluoride Ions on the Anodic Dissolution of Indium Amalgam, and Some Regularities of Electronic Processes Occurring with the Participation of Complexes — V. V. Losev and A. I. Molodov	121	5	474
The Theory of Unimolecular Reactions in Solids — V. I. Osherov	125	5	478
Certain Problems in the Theory of Porous Electrodes — A. G. Pshenichnikov	128	5	481
The Effect of Electron-Acceptor Impurities on the Optical and Photoelectric Properties of Magnesium Phthalocyanine — E. K. Putseiko	132	5	485
The Relation between Surface Layer Structure and Bulk and Surface Properties in a Pure Liquid — F. Ya. Reznik	136	5	489
Periodic Rule of Isotope Exchange in Diatomic Molecules — A. M. Rozen and A. I. Mikhailichenko	140	5	493

(continued)

Available From CB

CONTENTS (continued)

	PAGE	RUSS. ISSUE	RUSS. PAGE
The Recombination of Hydrogen Atoms on a Platinum Surface — I. N. Frantsevich and V. A. Lavrenko	144	5	1137
The Nature of H-Bonds in Systems with π -Electrons and their Effect on Proton Magnetic Resonance — D. N. Shigorin, N. N. Shaper'ko, A. P. Skoldinov, and G. S. Ryabchikova	147	5	1141
Emulsion Polymerization with Surface Activated Initiation — A. I. Yurzhenko and V. A. Vil'shanskii	151	5	1145
The Relationship between the Temperature Coefficient of the Rate of Combustion of Explosive Substances and Powders and the Pressure — A. F. Belyaev and G. V. Lukashenya	154	6	1327
A Thermodynamic Criterion for the Applicability of the Potential Theory of Adsorption — B. P. Bering and V. V. Serpinskii	158	6	1331
Electron-Acceptor Capacity of Metal Halides and Carbonium Ions — D. S. Bystrov and B. K. Nazarov	161	6	1335
The Mechanism of the Electrodeposition of Titanium from Aqueous Solution — N. T. Kudryavtsev and R. G. Golovchanskaya	165	6	1339
The Relation between the Mechanical Properties of Sulfocationite Grains, and the False Equilibrium States Observed in the Sorption of Organic Ions — G. S. Libinson and E. M. Savitskaya	169	6	1343
The Kinetics of Deuterium Exchange between Water Vapor and Hydrogen on Various Catalytic Surfaces — M. L. Nakhmanovich, N. M. Motozov, L. G. Buadze, and M. I. Temkin	172	6	1346
Effect of Deformation Rate on the Magnitude of Deformation and the Strength of Oriented Fiberglasses — A. L. Rabinovich and A. V. Turazyan	176	6	1350
Relation of the Equilibrium Constant in Isotope Exchange to the Bond Energy of Molecules and Atomic Masses — A. M. Rozen and A. I. Mikhailichenko	179	6	1354
Reactivity of Isomeric Decanols Formed as Intermediate Products in the Oxidation of n-Decane — I. P. Skibida, Z. I. Kulitskii, and Z. K. Matuz	183	6	1358
The Mechanism of Water Transfer in Capillary Porous Bodies — N. V. Churaev	186	6	1361

Available From CB

Soviet Physics

DOKLADY

A Translation of the Physics Sections of the Proceedings of the USSR Academy of Sciences

(Russian Original Vol. 151, Nos. 1-3, July, 1963)

Vol. 8, No. 7, pp. 633-746

January, 1964

CONTENTS

	PAGE	RUSS. ISSUE	RUSS. PAGE
AERODYNAMICS			
The Simplest Exact Solutions of the Boltzmann Equation for the Motion of a Rarefied Gas. <u>A. A. Nikol'skii</u> (T)	633	2	298
The Measurement of the Time for the Establishment of an Equilibrium Electron Concentration Behind a Shock Wave in Air. <u>T. V. Bazhenova</u> and <u>Yu. S. Lobastov</u> (B/T)	636	3	319
The Three-Dimensional Expansion-Contraction of a Rarefied Gas with Power Interaction Functions. <u>A. A. Nikol'skii</u> (T)	639	3	322
ASTRONOMY			
Radar Observations of Venus in the Soviet Union in 1962. <u>V. A. Kotel'nikov</u> , <u>V. M. Dubrovin</u> , <u>b. A. Dubinskii</u> , <u>M. D. Kislik</u> , <u>B. I. Kuznetsov</u> , <u>I. V. Lishin</u> , <u>V. A. Morosov</u> , <u>G. M. Petrov</u> , <u>O. N. Rzhiga</u> , <u>G. A. Sytsko</u> , and <u>A. M. Shakhovskoi</u> (E)	642	3	532
Soft X Radiation from Stars. <u>G. M. Nikol'skii</u> (T)	646	3	538
CRYSTALLOGRAPHY			
Magnetic Spatial Symmetry of Tensors. <u>Yu. I. Sirotin</u> and <u>V. A. Koptzik</u> (T)	649	2	328
Integral Bases of Tensor Invariants for Crystallographic Groups. <u>Yu. I. Sirotin</u> (T)	652	3	364
CYBERNETICS AND CONTROL THEORY			
Multidimensional Transportation Type Problems in Linear Programming. <u>B. S. Verkhovskii</u> (T)	655	3	515
FLUID MECHANICS			
Analogy between an Explosion and Hypersonic Flow Past a Thin Body with a Blunt Leading Edge. <u>G. G. Cherny</u> (T)	658	2	302
A Numerical Method for Calculating the Propagation of Linear Waves in Open Channels, and an Application to the Flood Problem. <u>O. F. Vasil'ev</u> , <u>S. K. Godunov</u> , <u>N. A. Pritvits</u> , <u>T. A. Temnoeva</u> , <u>I. L. Fryazinova</u> , and <u>S. M. Shugrin</u> (T/E)	661	3	525
MATHEMATICAL PHYSICS			
The Construction of S-Matrices. <u>B. M. Stepanov</u> (T)	663	1	84
The Scattering Problem in the Quasi-Classical Approximation. <u>V. Maslov</u> (T)	666	2	306
MECHANICS			
The Stability of the Motion of a Shaft. <u>Yu. V. Osetinskii</u> (T)	669	2	295

(continued)

Available From Amer Inst Phys
Sov Phys - Dok
Vol VIII, No 7

CONTENTS (continued)

		RUSS. PAGE	RUSS. ISSUE	RUSS. PAGE
MECHANICS OF CONTINUOUS MEDIA				
Destructive Shock Waves in Frangible Media. <u>Kh. M. Aliev</u>	(T) 673	1	80	
PHYSICS				
"Multiquanta Transitions" in Electron Paramagnetic Resonance. <u>N. V. Kravtsov</u> , V. N. Lazukin, and V. A. Shanditsev	(T/B) 676	1	87	
Radiation of Readily Ionizable Impurities of Plasma during Thermal Excitation, <u>O. P. Semenova and M. A. Levchenko</u>	(T) 679	1	89	
Temperature Dependence of the Photoconductivity of Dye-Sensitized Thallium Iodide. <u>I. A. Akimov</u>	(B/T) 681	2	310	
The Possibility of Recording High-Frequency Radiation at Lower Frequencies. <u>N. V. Kravtsov</u>	(T) 685	2	314	
Electronic Computer Solution of the Problem of Determining the Motion of Charged Particles of Different Signs and Masses in the Field of "Magnetic Bottles". <u>S. P. Lomnev</u>	(T) 686	2	315	
Damping of Free Oscillations by Radiation. <u>Yu. F. Orlov and S. A. Kheifets</u>	(T) 689	2	318	
A Majoration Technique in Quantum Mechanics. <u>O. I. Zav'yalov</u>	(T) 691	3	539	
Magnetic Anisotropy of Uniaxial Ferromagnets. <u>N. A. Potapkov</u>	(T) 694	3	543	
Generalization of Models of the Friedmann Universe. <u>K. P. Stanyukovich</u>	(T) 697	3	546	
Ionization Mechanism of the Formation of Structural Disturbances in Crystals. <u>S. V. Starodubtsev and A. E. Kiv</u>	(T) 701	3	550	
TECHNICAL PHYSICS				
Correlation between the Criteria of Static and Cyclic Strength of Metals. <u>I. A. Odintsov, V. S. Ivanova, and Yu. P. Liberov</u>	(T/B) 703	1	92	
Friction Properties of Rubber-Like Polymers at Low Temperatures. <u>G. M. Bartenev and A. I. El'kin</u>	(E/T) 706	2	320	
Theory of the Growth of Bainite Crystals during Transformation of Austenite. <u>L. N. Aleksandrov and B. Ya. Lyubov</u>	(T/E) 709	3	552	
Electron Diffraction Study of Elastic Deformation in Thin Condensed Polycrystalline Films of Aluminum and Silver. <u>L. S. Palatnik, M. Ya. Fuks</u> , <u>B. T. Boiko, and A. T. Pugachev</u>	(E/T) 713	3	558	
THEORY OF ELASTICITY				
Some Problems Concerning the Cylindrical Bending of Three-Layered Plates, Taking into Account the High-Elasticity Deformation of Vitreous-Plastic Sheathing. <u>A. A. Nikishin and A. L. Rabinovich</u>	(T) 716	3	528	
BIOPHYSICS				
Dynamics of Postradiation Recovery of Yeast Cells in Relation to γ -Ray Dose. <u>V. S. Barsukov, O. V. Malinovskii, and N. M. Mityushova</u>	723	1	209	
Reparative Regeneration of Rat Liver after Local X Irradiation. <u>M. M. Kalashnikova</u>	726	1	213	
An Investigation of the Protective Effect of Cystamine on Cells of Ehrlich's Ascites Carcinoma Irradiated in Vivo and in Vitro. <u>I. V. Nekrasova</u>	730	1	217	
Effectiveness of Protection of Rabbit Spermatozoa Against Genetic Injuries Caused by Irradiation in Vitro. <u>N. I. Nuzhdin and G. V. Nizhnik</u>	732	2	446	
Effect of Some Protective Substances on Change in Reactivity of Tissue Sulfhydryl Groups in Irradiated Animals. <u>L. I. Korchak and T. A. Speranskaya</u>	735	3	712	
Cybernetic Control of Process of Reversible Hypothermia. <u>E. V. Maistrukh</u> , <u>I. V. Eremenko, G. I. Il'yutkin, and V. A. Konstantinov</u>	737	3	714	
Permeability of Hematoencephalic Barrier to Inorganic Phosphate in Acute Radiation Sickness. <u>D. A. Cheverikov and S. V. Gasteva</u>	741	3	718	

Available From Amer Inst Phys
Sov Phys - Dok
Vol VIII, No 7

Soviet Physics SOLID STATE

A Translation of the Journal "Fizika Tverdogo Tela"
(Russian Original Vol. 5, No. 7, pp. 1769-2038, July, 1963)

Vol. 5, No. 7, pp. 1289-1494

January, 1964

CONTENTS

	RUSS. PAGE	PAGE
Determination of the Local-Level Parameters from Induced Infrared Impurity Photoconductivity in CdS Single Crystals. <u>I. A. Mirskhulova, R. I. Chikovani, and A. I. Shkol'nik</u> (B/T) 1289 1769		
Theory of Second-Order Phase Transitions. <u>A. P. Levanyuk</u> (T) 1294 1776		
Investigation of the Vibration Spectra of Certain Ferroelectrics by the Method of Combination Scattering of Light. <u>P. A. Bazhulin, T. P. Myasnikova, and A. V. Rakov</u> (B) 1298 1783		
Exciton Energy Spectrum in the Case of Weak Binding. <u>I. G. Zaslavskaya</u> (T) 1306 1791		
Optical Constants of Indium Antimonide in the Visible and Near Ultraviolet Regions of the Spectrum. <u>N. I. Kurdiani</u> (B/T) 1310 1797		
Effect of Thermal Expansion on the Temperature Dependence of Constants of the Magnetic Crystallographic Anisotropy of Ferromagnets. <u>A. I. Misek</u> (T/B) 1312 1800		
Dependence of Thermally Stimulated Conductivity on the Conditions of Preliminary Illumination of CdS Single Crystals Treated with Sulfur Vapor. <u>A. P. Trofimenco, G. A. Fedorus, and M. K. Sheinkman</u> (B/T) 1316 1805		
Nuclear Magnetic Resonance in Ferromagnetic Substances. <u>I. I. Buiashvili and N. P. Giorgadze</u> (T) 1322 1814		
Determination of Force Constants and Calculation of the Vibrational Spectrum of Tellurium. <u>V. G. Boltev</u> (T/B) 1328 1822		
Concerning Photoconductivity Spectra of n-Type Silicon Irradiated by Fast Electrons. <u>V. D. Tkachev, A. F. Plotnikov, and V. S. Vavilov</u> (B) 1332 1826		
On the Influence of Infrared Irradiation on the Electret State of Naphthalene. <u>F. I. Polovikov</u> (B) 1336 1830		
On Defects Produced by γ Rays in Germanium. <u>N. A. Vitovskii, B. M. Konovalenko, T. V. Mashovets, S. M. Ryvkin, and I. D. Yaroshevskii</u> (B/T) 1338 1833		
Energy Levels in Germanium Induced by Fast-Neutron Bombardment. <u>R. F. Konopleva, S. R. Novikov, and S. M. Ryvkin</u> (B) 1345 1842		
Theory of Heavily Doped Semiconductors. <u>V. I. Bonch-Bruevich</u> (T) 1353 1852		
Third-Order Elastic Constants of CsCl-Type Crystals. <u>A. A. Niran'yan</u> (T) 1361 1866		
Effect of Impurities on the Anomalous Transmission of X Rays through Germanium. <u>O. N. Efimov and A. M. Elistratov</u> (B) 1364 1869		
Some Peculiarities of Radiative Trapping of Electrons by Indium and Gallium Atoms in Silicon. <u>Ya. B. Pokrovskii and K. I. Svistunova</u> (B) 1373 1880		

(continued)

Available From Amer Inst Phys
Sov Phys - Solid State
Vol V, No 7

CONTENTS (continued)

	RUSS. PAGE	PAGE
Effect of the Degree to Which Bonding is Covalent on the Spin-Lattice Relaxation of an Octahedral Complex with One Magnetic Electron. <u>I. V. Ovchinnikov</u> (T)	1378	1887
Acoustoelectric Effects in Piezoelectric Semiconductors. <u>V. B. Sandomirskii</u> and <u>Sh. M. Kogan</u> (T)	1383	1894
Creep of NaCl and KCl Single Crystals at Temperatures Near the Melting Point and Under Small Loads. <u>Ya. B. Geguzin, V. L. Rabets, and A. A. Chernyshov</u> (B)	1387	1900
Mobility of Holes in Germanium Doped with Aluminum and Indium. <u>O. A. Golikova</u> and <u>A. G. Orlov</u> (B/T)	1393	1908
Investigation of the Thermal Expansion of Lead Chalcogenides. <u>S. I. Novikova</u> and <u>N. Kh. Abrikosov</u> (B/T)	1397	1913
Molecular Relaxation in Polymers Considerably above the Vitrification Temperature. <u>G. P. Mikhailov and A. M. Lobanov</u> (B)	1400	1917
Bremstrahlung Radiation of an Ultrarelativistic Electron in a Crystal. <u>N. P. Kalashnikov</u> . (T)	1405	1924
Relation between Specific Heat and the Thermal Scattering Factor of X Rays. <u>L. P. Potapov</u> (T)	1408	1927
Recombination of Charge Carriers on Zinc Atoms in p-Type Silicon. <u>K. D. Glinchuk, A. D. Denisova, and N. M. Litovchenko</u> (B)	1412	1933
Electron Paramagnetic Resonance of Bu^{3+} Ions in BaF_2 and SrF_2 Single Crystals. <u>V. M. Vinokurov, M. M. Zaripov, V. G. Stepanov, G. K. Chirkin, and L. Ya. Shekun</u> (B/T)	1416	1936
Electron Emission from p-n Junctions in SiC Prepared by Nitrogen Diffusion. <u>I. Fridel' and G. F. Kholuyanov</u> (B)	1418	1940
Distortion of Crystal Vibrations by Defects. <u>G. S. Zav'yalov</u> (T)	1422	1946
Change in Thermal Conductivity of Cubic Crystals on Deformation. <u>I. A. Smirnov and B. Ya. Molzhes</u> (B/T)	1430	1958
Relation between the Dislocation Theory of Twins and the Lishits Macroscopic Theory. <u>A. M. Kosevich and L. A. Pastur</u> (T)	1439	1970
Photoconductivity of Thin Indium Antimonide Films. <u>V. A. Kas'yan</u> (B/T)	1445	1979
Displacements of Ions in an Ionic Crystal Due to Natural Vibrations. <u>A. I. Raichenko</u> . . . (T)	1447	1982
Width of the Resonance Curve of an Anisotropic Ferromagnet. <u>Meng Hsien-ch'en</u> (T)	1452	1988
External Photoeffect from the Surfaces of Organic Semiconductors. <u>F. I. Vileinov, A. A. Zagrubskii, and D. Z. Garbuzov</u> (B)	1460	2000
BRIEF COMMUNICATIONS		
Thermal Etching of Cuprous Oxide Single Crystals in Vacuum. <u>A. I. Andrievskii, G. F. Mocharyuk, and M. M. Pidorya</u> (B)	1465	2007
Temperature Dependence of the Electric Field Gradient in the Ferroelectric $NaNO_3$. <u>A. G. Lundin and S. P. Gabuda</u> (B/T)	1467	2009
Anisotropy of the Diffusion of Oxygen and Boron in Rutile. <u>V. N. Bogomolov</u> (B)	1468	2011
The Nature of Hydrothermal Etch Figures on Ferrite Crystals Having the Garnet Structure. <u>P. B. Klevtsov and V. D. Zamozhskii</u> (B)	1469	2012
Effect of Copper and Silver on the Photoelectric Properties of Glassy As_2Se_3 . <u>A. V. Danilov and M. É. Mosli</u> (B)	1472	2015
Effect of Adsorption of Molecules on the Luminescence, Electrical Conductivity and the Luminescent Field Effect of Cu_2O . <u>G. P. Peka</u> (B)	1473	2017
Fine Structure of the Angular Dependence of the Resonance Curve Width of Yttrium Garnet with Terbium Impurity. <u>A. G. Gurevich and V. I. Solov'ev</u> (B/T)	1475	2019
Infrared Transmission of Neutron-Irradiated Indium Antimonide. <u>N. L. Kurdiani</u> (B)	1477	2022
Current-Induced Impurity Photo-emf. <u>F. M. Berkovskii and S. M. Ryvkin</u> (B/T)	1478	2023

(continued)

Available From Amer Inst Phys
Sov Phys - Solid State
Vol V, No 7

CONTENTS (continued)

	RUSS. PAGE	PAGE
Effect of Plastic Deformation, Produced by High-Frequency Vibrations, on the Internal Friction and Young's Modulus of Alkali-Halide Crystals. <u>E. P. Belozerova</u> (B)	1480	2025
Anisotropy of the Drift Mobility of Carriers in Partly Reduced Rutile. <u>V. N. Bogomolov and P. M. Shavkunov</u> (B)	1481	2027
Results of an Investigation of the Microhardness Anisotropy of Indium Antimonide by the Scratch Method. <u>V. N. Lange and T. I. Lange</u>	1483	2029
Preparation and Some Properties of CdGeAs ₃ Single Crystals. <u>N. A. Goryunova, F. P. Kesamanly, and E. O. Oamanov</u> (B)	1484	2031
Thermal Conductivity of Plastically Deformed NaCl Single Crystals. <u>B. D. Devyatkova and I. A. Smirnov</u>	1485	2032
Paramagnetic Resonance of Nb ⁴⁺ Ions in Zircon Single Crystals. <u>V. M. Vinokurov, M. M. Zaripov, V. G. Stepanov, G. K. Chirkov, and L. Ya. Shekun</u> (B/T)	1487	2034
Interband Faraday Effect in Germanium in a Strong Magnetic Field. <u>I. I. Korovin and B. V. Kharitonov</u>	1488	2035

Available From Amer Inst Phys
Sov Phys - Solid State
Vol V, No 7

PLANT PHYSIOLOGY

A translation of Fiziologiya Rastenii

(Russian Original Dated March-April, 1981)

Vol. 8, No. 2, pp. 111-206

September-October, 1981

CONTENTS

	RUSS. PAGE	PAGE
Role of Leaves in Sugar Accumulation by Sugar Beet Roots and in Development of the Anatomical Structure Peculiar to Them. T. V. Shvertsel' and A. S. Okanenko	111	145
Physiological Activity of Photosynthates of Plants Exposed to Light of Various Spectral Compositions. R. G. Butanko, A. A. Nichiporovich, and N. N. Protasova	117	153
A New Approach to Studying the Energy Yield of Photosynthesis. L. N. Bell and G. L. Merinova	123	161
Photosynthesis by Dinoflagellates of the Black Sea. L. V. Moshkina	129	172
Secondary Products of Photosynthesis in Fine-Fibered Cotton. A. K. Nosov	133	178
Interaction of Heterotrophic and Autotrophic Nutrition in Potato Ontogenesis. N. N. Mosh	137	188
Effect of High Temperatures on Water Relations and Nitrogen Metabolism of Plants. N. S. Petinov and I. I. Razmaev	141	188
Developmental Rhythm of Corn Grown under Various Conditions of Water Supply. B. I. Shcherbakov	146	196
Effect of Various Types of Nitrogen Fertilizers on Catalase and Peroxidase Activities in Wheat and Barley Grains. V. V. Pinevich	152	205
Sex and Its Modification in Hemp. A. A. Zemlyanukhin and S. V. Shershina	158	213
Detoxication of Isopropylphenylcarbamate (IPC) in Sunflower and Oat Plants. V. A. Zemskaya and Yu. V. Rakitin	164	220
Histochemical Study of Some Processes Taking Place during Hardening of Corn Seeds by Varying Temperatures. V. Yu. Strekova	168	226
Wilt Resistance and the Physicochemical Properties of Biocolloids in Leaves of Various Varieties of Grafted Cotton Plants. N. N. Nazirov	173	233
BRIEF COMMUNICATIONS		
Stabilization of the Primary Products of Carbon Dioxide Reduction. E. A. Brichenko and G. N. Saenko	179	241
Effect of the Amount of Moistening on Cotton Seed Germination. V. P. Solov'yev	182	244
Influence of Rain and Dew on Water Conditions in Plants. F. G. Miftakhutdinova	185	247
METHODS		
A More Refined Method of Calculation in Microdeterminations of Sugars. V. A. Zenchenko	189	251
A Simplified Method for Determining the Area of Apple Tree Leaves. I. G. Fulga	193	255
BOOK REVIEWS		
Physiology of Drought-Resistant Woody Plants of the Apseron. B. Z. Guseinov. Reviewed by S. A. Alekperov	196	258
CURRENT EVENTS		
Conference on the Physiology of Plant Development Held in Czechoslovakia (Résumé of Proceedings). A. S. Kruzhilin and Z. M. Shvedskaya	198	260
The Ninetieth Anniversary of Leonid Aleksandrovich Ivanov. Yu. L. Tsel'niker	200	262

Available From AIBS

SOVIET PLANT PHYSIOLOGY

A translation of Fiziologiya Rastenii

(Russian Original Dated May-June, 1961)

Vol. 8, No. 3, pp. 207-308

November-December, 1961

CONTENTS

	PAGE	RUSS. PAGE
Distribution of C ¹⁴ among Groups of Basic Substances in Leaves of Different Whorls of Soya in Ontogenesis. I. F. Belikov.....	207	266
Effect of ATP on the Entry of Assimilates into the Conducting System of Sugar Beets, A. L. Kursanov and M. I. Brovchenko	211	270
Effect of Wilting in Carbohydrate Conversion. N. V. Subbotina	218	279
Water Relations of Some Hygrophytes. N. I. Antipov	222	284
Variations in Water Absorption by Corn Roots at Various Levels. A. A. Volynkin	229	294
Effect of Chemical Stimulants on Potato Plant Germination and Productivity, V. P. Kiryukhin.....	232	299
Localization of the Gibberellin Reaction in Plants. G. A. Evtushenko.....	238	304
Effect of Nucleic Acids, Adenine and 2,4-D on the Growth of Gladiolus Tissue Cultures, N. A. Satarova	240	309
Nitrogen Metabolism of Wheat in the Far North. M. G. Zaitseva	243	318
Causes of Yield Reduction in Tomato Plants Insufficiently Illuminated in the Fourth Stage of Development. Z. I. Shan'gina	254	328
Effect of Redox Properties of Solutions Absorbed by Seeds on Vernalization Rate and Extent of Branching in Ears. F. Ya. Mekhanik	257	330
Effect of Day Length on Glycolysis and the Tricarboxylic Cycle. N. P. Aksenova.....	262	338
Unproductive Leaf Respiration and Resistance of Thermophilic Plants to Cooling of the Root System. S. V. Kushnirenko.....	268	348
BRIEF COMMUNICATIONS		
Effect of Nickel Microfertilization on Some Physiological-Biochemical Properties in Grapes, O. K. Dobrolyubskii and A. V. Slavko	275	355
Effect of Gibberellic Acid on Ergot, <i>Claviceps purpurea</i> Tul., in Both Saprophytic and Parasitic Culture. N. I. Ostrovskii, A. I. Shalagina, M. A. Kryukova, and A. N. Ban'kovskaya	278	358
PRACTICAL APPLICATIONS		
Decrease in Preprouting Death of Thermophilic Plant Seeds at Low Temperatures, L. A. Nezgovorov, Sh. I. Ibragimov, and A. K. Solov'ev	281	361
METHODS		
Automatic Observation of Weight Variation in Plant Material. Ya. Pazourek	289	371
A New Method for Determining Leaf Surface Area of Cereals. V. V. Anikiev and F. F. Kutuzov	293	375
BOOK REVIEW		
Respiration and Its Role in Plant Immunity. B. A. Rubin. Reviewed by V. E. Pontovich...	296	378

(continued)

Available From AIBS

FIZIOLOGIYA RASTENII, Vol VIII, No 3, 1961.

CONTENTS (continued)

	RUSS. PAGE	PAGE
CURRENT EVENTS		
Conference on Gibberellin and Gibberellin-Like Substances, V. G. Kochankov.....	298	280
And... dr Vasil'evich Krylov, A. A. Prokof'ev.....	300	282

Available From AIBS

SOVIET PLANT PHYSIOLOGY

A translation of Fitziologiya Rastenii

(Russian Original Dated July-August, 1961)

Vol. 8, No. 4, pp. 307-416

January-February, 1962

CONTENTS

	RUSS. PAGE	PAGE
The Role of Bean and Corn Leaves in Respiration of Oxygen-Deprived Roots S. V. Soldatenkov and Chao Hien-Tuan.....	307	385
Metabolism of Roots Under Various Levels of Aeration I. M. Dubinina.....	314	395
Energy Balance of Respiring Plant Tissues Under Various Conditions of Water Supply V. N. Zholkevich.....	323	407
Effect of High Temperatures on Respiration Rate and Carbohydrate Metabolism in Plants N. S. Patinov and I. I. Rasmussen	331	417
Effect of Trace Elements on the Development of Corn and on Oxidation-Reduction Processes During Its Ontogeny M. Ya. Shkol'nik and S. A. Abdurashitov	337	425
The Effect of Temperature and Light Conditions on the Annual Development Cycle of the Apple Tree K. M. Poplavskii and A. S. Golubkova	344	434
Special Characteristics of the Formation of Amino Acids and Protein in Plant Leaves During Photosynthesis T. F. Andreeva and G. F. Korsheva.....	350	441
The Effect of Copper on the Carotenoid Content of Plants Ya. V. Peive, G. Ya. Zhiznevskaya, and A. E. Krauya	356	449
The Effect of Gibberellin Acid on the Mineral Nutrition of Plants A. Z. Denisova and I. S. Lupinovich	360	454
Effect of Gibberellin Acid on Rice P. S. Brygin, E. P. Aleshin, M. A. Sautich, and T. M. Fenelonova.....	365	460
Summer Dormancy in Bulbous Barley (<i>Hordeum bulbosum</i> L.) A. A. Prokof'ev and Kh. Kh. Karimov	370	467
Loss of Frost Hardiness in Apple Trees with Incompatible Scion and Stock V. A. Korovin	376	476
Comparative Resistance of Cells to Freezing, Desiccation and Plasmolysis, and Its Variation During Hardening G. A. Samygin and N. M. Matveeva.....	381	482
Microculture of Plant Tissues M. S. Bardinskaya	387	490
BRIEF COMMUNICATIONS		
Effect of Gibberellin on Alfalfa Growth and Crop Yield A. I. Shchukina	390	495

(continued)

Available From AIBS

CONTENTS (continued)

	RUSS. PAGE	PAGE
Growth and Development of Cucumbers and the Concentration of Cell Sap in Their Leaves at Different Soil Moistures		
V. F. Belik	393	497
Special Characteristics of Diurnal Elongation of Plants in Connection with the Local Application of Superphosphates		
I. D. Filip'ev	397	501
PRACTICAL APPLICATIONS		
New Defoliants and Desiccants for Cotton		
Yu. V. Rakitin, K. S. Bokarev, V. A. Kraft, Z. G. Rakitina, T. M. Geiden, and S. M. Gurvich.....	401	506
METHODS		
An Electrolytic Hygrometer for Measuring Air Humidity Inside Fruits		
V. P. Kholodova	405	512
BOOK REVIEW		
Trace Elements and Enzymes		
Ya. V. Peive... Reviewed by M. Ya. Shkol'nik	409	516
CURRENT EVENTS		
All-Union Conference on the Cultivation of Unicellular Algae		
V. E. Semenenko and M. G. Vladimirova	411	518

Available From AIBS

SOVIET PLANT PHYSIOLOGY

A translation of Fiziologiya Rastenii

(Russian Original Dated September-October, 1961)

Vol. 8, No. 5, pp. 417-522

March-April, 1962

CONTENTS

	PAGE	RUSS. PAGE
Immediate Problems of Plant Physiology in the Light of Resolutions of the January Plenum of the Central Committee of the CPSU.	417	521
Kinetics of the Specific Activities of Phytol and Phlorbin Carbon in Chlorophyll <i>a</i> and <i>b</i> During Turnover. A. A. Shlyk and T. V. Kukhtenko	421	528
Properties of Plant Crops as an Optical System. A. A. Nichiporovich.	428	538
Nutrition of Common Mistletoe. N. Sélédzhanu and D. Galan-Fabian.	436	547
Absorption of Molecular Hydrogen by Illuminated Leaves. G. A. Sanadze.	443	555
Translocation of Assimilates in Potato Plants. A. T. Mokronosov and N. K. Bubenshchikova.	447	560
Water Exchange Between Plant Tissues and Liquid Water and Vapor in the Environment. B. B. Vartapetyan and A. L. Kursanov.	455	569
Thermal Treatment of Dry Wheat Seeds and Its Effect on the Plants. T. G. Kydrev and V. M. Kolev.	460	576
Effect of Mineral Nutrition on the Uptake of Free Amino Acids in Potato Plant Stems. A. P. Kalinkevich and A. D. Mochalova.	464	582
Influence of Nutrient Solution Concentration on Absorption of Mineral Elements by Plants. Z. I. Zhurbitskii and Huans Wér-Nang.	468	587
Application of Urea to Corn Leaves in Relation to the Stage of Plant Development. A. N. Pavlov, V. P. Ivanov, and V. I. Razuvaeva.	475	596
Interaction of Physiologically Active Substances in Plant Cuttings During the Formation and Growth of Roots and Stems. M. Kh. Chailakyan, R. Kh. Turetskaya, and N. S. Klyushkina.	479	601
Effects of Inhibitors on Processes of Plant Vernalization. Z. M. Shvedskaya and A. S. Krushilin.	486	613
Comparative Study of the Developmental Process in Winter Barley, Variety Chenod 398 (Twin-Form), and Summer Barley, Variety Klush 123. N. Zhosan, Yu. Barbat, and I. Puya.	493	619
M. V. Lomonosov on the Atmospheric Nutrition of Plants (on the 250th Anniversary of his Birth, November 9, 1711). K. F. Kalmykov	498	626
BRIEF COMMUNICATIONS		
Leaf Temperature of Some Plants in the Khibin. V. V. Kryuchkov	502	631
Accelerating Effect of Low Temperatures on Germination of Cotton Seeds in Salinized Soils. D. Agakishiev.	505	633
Variation in Bound and Soluble Iron of Various Organs of Chlorotic Apple Trees. S. M. Ivanov and V. A. Orgiyan.	507	636
PRACTICAL APPLICATIONS		
Presowing Drought Hardening of Tomatoes under Production Conditions. K. L. Mart'yanova, Z. P. Gubanova, and V. K. Zhurikhin	509	638

(continued)

Available From AIBS

FIZIOLOGIYA RASTENII, Vol VIII, No 5, 1961.

CONTENTS (Contd)

		PAGE	RUSS. PAGE
METHODS			
A New Method for Determining Plant Transpiration. A. A. Prokof'ev		511	841
BOOK REVIEW			
Interrelation of Physiological Processes in Plants. Twentieth Timiryazev Lecture. A. L. Kursanov.....		514	844
CURRENT EVENTS			
Conference on Application of Herbicides and Growth Stimulators in Agriculture. S. M. Mashtakov		518	848

Available From AIBS

SOVIET PLANT PHYSIOLOGY

*A translation of *Fitologiya Rastenii**

(Russian Original Dated November-December, 1961)

Vol. 8, No. 6, pp. 523-624

May-June, 1962

CONTENTS

	PAGE	RUSS. PAGE
Sucrose Absorption by Plant Conducting Tissues, M. V. Turkina.....	523	849
Effect of Gibberellin on the Nitrogen Metabolism of Hemp (<i>Cannabis sativa L.</i>), F. V. Yanishevskii	528	858
Biosynthesis of Amino Acids from Pyruvic Acid and Ammonia in Rice and Sunflower, V. L. Kretovich and M. Kasperk.....	533	863
Changes in Adenosine Triphosphate Activity of Subcellular Units in Heat-Treated Plants, Yu. G. Molotkovskii.....	537	869
Effect of Various Forms of Nitrogen and Potassium Fertilizers on Belladonna Yield and Accumulation of Alkaloids, A. S. Alov.....	540	873
Effect of Dicarboxylic Acids on Pollen Germination and Growth of Pollen Tubes, U. A. Petrochenko.....	548	881
Excretion by Plant Roots During Brief Periods of Anaerobiosis, G. M. Grineva.....	549	886
Boron Requirement of Buckwheat During Its Development, A. P. Shustova.....	553	892
Effect of Fruits on Osmotic Pressure of Leaf Sap and Initiation of Flower Buds in Apple, L. Khvoika	558	898
Effect of Molybdenum on Changes in Plastid Pigments in the Leaves of Various Plants, E. I. Ratner, I. A. Burkin, and G. G. Tskhovrebashvili.....	564	907
Growth and Photosynthesis of Potato Plants in the Far North, E. K. Kardo-Sysoeva and B. G. Kopteva.....	570	915
Certain Peculiarities of Oxygen Absorption by Green Leaves in Light, N. P. Voskresenskaya and G. S. Grishina	579	926
Inhibition of Photosynthesis by Isonicotinic Acid Hydrazide, Hydroxylamine, and Chloramphenicol, N. N. Khurduk and L. A. Nezgovorova	585	934
Effect of Cosmic Flight Conditions on the Viability of Chlorella in a Spaceship (<i>Sputnik</i>), V. E. Semenenko and M. G. Vladimirova.....	592	943
BRIEF COMMUNICATIONS		
Respiration and Photosynthesis of Albino Sunflower Plants, I. I. Lyashchenko	598	750
Vernalization of Winter Plants During Variation of Light and Temperature Conditions, A. K. Fedorov	600	752
Chlorophyll Content as Physiological Index of Heterosis in Corn, I. A. Shul'gin, F. M. Kuperman, V. A. Vysloukh, and I. P. Shcherbina.....	603	754
Author Index: Volume 8, 1961	607	
Tables of Contents: Volume 8, 1961	612	

Available From AIBS



GEOCHEMISTRY

A Translation of

GEOKHIKIYA

No. 3

1963

CONTENTS

A. P. Vinogradov. Centenary of V. I. Vernadskii's Birth	211
A. P. Vinogradov. Biogeochemical provinces and their role in organic evolution	214
N. V. Belov. One of V. I. Vernadskii's fundamental generalizations	229
N. I. Khitarov, V. A. Pugin, Pin Chao and A. B. Slutskii. Relations between andalusite, kyanite and sillimanite at moderate temperatures and pressures	235
V. V. Shchorbina. Differences in geochemical processes occurring with the participation of potassium and sodium	245
V. I. Gerasimovskii. Geochemistry of fluorine in nepheline syenites .	253
I. E. Starik, E. V. Sobotovich and M. M. Shats. The problem of the origin of meteorites and tektites	261
V. V. Cherdynsev, I. V. Kazachevskii and E. A. Kuz'mina. Isotopic composition of uranium and thorium in the supergene zone	271
A. I. Tugarinov, S. I. Zykov and E. V. Bibikova. Determination of the age of sedimentary rocks by the lead-uranium method	284
K. P. Floronskii. Cosmic dust and the present state of the investigation of the Tungus Meteorite	301
A. A. Beus, B. P. Sobolev and Yu. P. Dikov. Geochemistry of beryllium in high temperature postmagmatic mineralization	318
I. D. Ryabchikov and L. N. Kogarko. Effect of anion exchange on the acidity of magma	324
M. G. Valyashko, A. I. Polivanova and I. K. Zhorebtsova. Experimental investigation of movement of solutions differing in density through porous rocks and vertical hydrochemical zonation	332
S. V. Bruyevich. Rates of mineralization of suspended organic matter in the low latitudes of the Pacific during the pre-depositional stage	349
S. I. Smirnov. Statistical estimation of the geochemical background in geochemical prospecting	363

Available From Scripta Technica

INZHENERNO-FIZICHESKIY ZHURNAL

(Journal of Engineering Physics)

Vol VI, No 5, May 1963

- USSR -

Following is a translation of 21 articles in the Russian-language periodical Inzhenerno-fizicheskiy zhurnal (Journal of Engineering Physics), Vol VI, No 5, published by the Academy of Sciences USSR, signed to the press on 2 May, 1963, pages 3-6 and 17-134. Bibliographic information accompanies each article.

Note: pages 7-16 are from an original English-language source, and are not included here.

TABLE OF CONTENTS

	<u>Page</u>
Heat Conductivity of D_2O in the Gaseous Phase.....	1
Investigation of Heat Transfer and Hydraulic Resistance for Longitudinal Water Flow in a Duct Bundle.....	9
Calculation of the Boiling Point.....	20
Heat Exchange in Molten Metals Under Natural Convection Conditions.....	31
Calculation of Heat Exchange of Two Right-Angle Intersecting Plane Surfaces.....	38
Igniting Conditions and Flame Configurations in a Furnace of Intersecting Jets.....	49
(continued)	
Available From JPPS 22553	

INZHENERNO-FIZICHESKIY ZHURNAL

(Journal of Engineering Physics)

Vol VI, No 7, July 1963

- USSR -

Following is a translation of 26 articles in the Russian-language periodical Inzhenerno-fizicheskiy zhurnal (Journal of Engineering Physics), Vol VI, No 7, published by the Academy of Sciences USSR, July 1963, Minsk, pages 3-139.

NOTE: Author's English summaries are given at the end of each article.

TABLE OF CONTENTS

	<u>Page</u>
Measurement of Thermophysical Coefficients by the Absolute Method of the Regular Regime of the Third Kind With Compensation of the Irregular Process	1
Methods of Evaluating Local Heat Transfer Coefficient in Flow Around a Cylindrical Surface	6
An Investigation of the Parameters of Motion of Particles in A Fluidized Bed by a Radio-isotope Method. I. Experimental Method and Trajectory of Particles	14
On the Origin of Self-Oscillations in a Fluidized Bed	23
Free Flow of Loose Material Through a Hole in the Conical Bottom of a Vessel	32

(continued)

Available From JPRS 22715

Table of Contents (Cont'd)

	<u>Page</u>
A Thermodynamic Analysis of Gas Liquefaction Processes	46
Thermodynamic Properties of Dissociated Hydrogen and Oxygen	57
A New General Formula for the Saturated Vapor Pressure of Liquids of Various Kinds	66
Calculation of Thermodynamic Properties of Real Gases at High Temperatures. Equation of State of Ammonia	72
On the Thermodynamic Interpretation of Manley and Rowe's Theorem in the Theory of Non-linear Electric Oscillations	80
Unsteady Heat Conduction in a Hollow Cylinder with Known Temperatures at the Boundaries	89
Effect of Lateral Heat Loss on Temperature Field in Semiinfinite Rods with a Plane Source of Constant Strength	95
Transient-State Thermal Conduction and Thermo-elastic Stresses in a Hollow Cylinder	103
Temperature Distribution in an Infinitely Long Rotating Hollow Cylinder	112
Temperature Distribution in a Laminar Jet of Conducting Gas Entering a Space Containing a Magnetic Field	118
Effect of Moisture on Propagation of Ultra-sound in Capillary-Porous Solids	125
Method of Calibrating and Checking Hygrometry Transducers by Reference to Saturation Deficit in a Three-Chamber Hygrothermostat	130
Analytic Method for the Solidification of a Body of Simple Shape	134
Surface Tension and Density of Iron-Sulfur and Iron-Phosphorus Melts	143
Analysis of the Thermal Processes in Dies during Hot Stamping	148

Available From JPRS 22715

(continued)

Table of Contents (Cont'd)

	<u>Page</u>
Equation of State for Difluorodichloromethane (freon-12)	156
Some Thermodynamic Features of the Triple Point	160
Temperature Distribution in a Homogeneous Half-Space	162
Addition of "Turbulent Heat and Mass Transfer at a Porous Plate in the Presence of Outflow or Inflow of Gas"	164
Addition to Sh. N. Plyat's Paper "Solution of Transient-State Thermal-Conduction Problems for Hollow Cylinders by Grinberg Method"	165
Bibliography of Heat and Mass Transfer	168

Available From JPRS 22715

TRANSLATIONS FROM INZHENERNYY ZHURNAL

(ENGINEERING JOURNAL)

VOL III, NO 3, 1963

- USSR -

Following is a complete translation of the Russian-language magazine Inzhenernyy zhurnal (Engineering Journal), Vol III, No 3, 1963, Moscow, USSR Academy of Sciences Publishing House, pages 417-615. Complete bibliographic information accompanies each article.

TABLE OF CONTENTS

	<u>Page</u>
The Frontal Disruption Zone Upon Asymmetrical Flow Around a Pointed Body by a Supersonic Gas Stream	1
Flow Around a Plate at the Attack Angle of a Supersonic Viscous Gas Current	12
A Plane Ended Cylinder in a Supersonic Current of an Ideal Gas	16
Flow of a Rarified Gas Along a Wall Suddenly Placed in Motion	29
Lifting Force and Moment of a Thin Profile in an Arbitrary Transient Flow	51
An Investigation of Airflow and Loading on the Blades of a Helicopter Rotor in Horizontal Flight	58
Burning Stability of Liquid Explosive Materials with Constant Pressure	86

(continued)

Available From JPRS 22567

CONTENTS (Contd)

Page

The Dynamics of a Conducting Continuum in a Strong Magnetic Field	103
Spherical Wave Propagation in a Viscoelastic Medium	110
Vibrations of a Circular Ring Carrying a Concentrated Mass	128
Bending of Flexible Plates with Pinned Edges	143
Oscillations of a Closed Circular Cylindrical Shell in a Field of Random Acoustic Pressures	158
Effect of a Transverse Load on Stability and on Reducing Coefficients of a Compressed Multipanel Continuous Plate	169
On the Stability of Circular Orbits of Artificial Earth Satellites .	184
On Inverse Problem Solution by the Method of Expansion into Series .	193
Evaluation of the Relaxation Time of the Melting Speed of Vitreous Materials	198
Thermodynamic Functions of Gases at High Temperatures	209
Some Accurate Solutions of Equations on the Movement of Monatomic Gas	222
Refining One Example of a Near-Sonic Flow	234
Losses in Supersonic Jet Lattices in Noncalculated Regimes	244
Calculation of Aerodynamic Interference Forces Between Two Rotation Bodies	262
The Theory of Disintegration of a Drop by a Gas Flow	280
Motion Equations of a Gas Condensate Mixture in Porous Media	289
Equations for Heat Conductivity in a Heterogeneous Continuum	296
Plastic Bending of a Circular Plate	306
An Approximate Solution of Nonlinear Boundary-Value Problems	317
The Equilibrium of a Drop-Shaped Shell Subject to Large Deformation	325
A General Solution of a Two-Dimensional Problem for the Wedge	333

(continued)

Available From JPRS 22567

INZHENERSYY ZHURNAL, Vol III, No 3, 1963.

CONTENTS (contd)

	<u>Page</u>
The Stability of Orthotropic Cylindrical Shells Under Thermal Action	399
The Bending of Circular Plates Supported at Several Points and Coupled with the Walls of Cylindrical Shells	351
The Mechanics of Cosmic Flight with Low Thrust. I.	362

Available From JPRS 22567

Measurement Techniques

*A translation of Izmeritel'naya Tekhnika, a publication of the
Academy of Sciences of the USSR
(Russian Original Dated June, 1963)*

1963, No. 6, pp. 455-538

November, 1963

CONTENTS

	PAGE	RUSS. PAGE
GENERAL PROBLEMS OF METROLOGY		
Quantity of Information for a Uniformly Distributed Measured Variable and Error. <u>V. I. Rabinovich and M. P. Tsapenko</u>	455	1
LINEAR MEASUREMENTS		
Ultraoptimeter IKP-2. <u>V. A. Nikitin and E. P. Smirnova</u>	461	6
Semiautomatic Testing of Block Gauges. <u>A. V. Vorontsova and I. L. Galitukii</u>	464	8
Instrument for Automation of Large Diameter Testing. <u>V. A. Truten'</u>	465	9
Device for Washing Gauges and Measuring Instruments. <u>N. V. Kotova</u>	470	13
Mechanical Measurements		
Pump for Liquids with Pedal Drive. <u>S. A. Abieev</u>	471	14
Well-Type Automatic Differential High-Precision Manometer. <u>I. I. Gaider and M. F. Givonyku</u>	471	14
Thermotechnical Measurements		
Effective Wavelength of a Photoelectric Spectral Pyrometer. <u>I. I. Kijankov</u>	474	18
Selecting the Value of a Thermistor for Remote Measurements of Temperature. <u>V. Ya. Kozhukh</u>	477	18
Instrument for Measuring Heat Flows. <u>N. V. Pak</u>	479	20
Refractory Insulation for Thermal Electrodes Used for Measuring High Temperatures. <u>O. M. Margul's, I. F. Usatikov, A. B. Kamenetskii, V. I. Lakh, and B. I. Stadnyk</u>	480	21
Electrical Measurements		
Bridge Converters of Resistance, Capacitance, and Inductance into Frequency. <u>V. Yu. Kneller and L. N. Sokolov</u>	483	22
Sensitive Transistor-Magnetic Instrument Converter of Direct Current to Frequency. <u>G. A. Dmitrenko</u>	487	26
Digital Display of Measured Values in Zonal Testing. <u>F. B. Temnikov and V. L. Slavinskii</u>	492	30
Design of AC Automatic Digital-Display Bridges. <u>F. B. Grinevich</u>	496	33
Precision, Transistorized Summing Amplifier. <u>V. A. Bulgakov, A. S. Eremin, and B. S. Rozov</u>	500	38
Instrument for Measuring Magnetic Field Strength. <u>R. L. Fogel'son and N. V. Kotsosov</u>	505	41
Testing Cold Cathode Tubes. <u>A. M. Erkin</u>	506	42
Designing the Measuring Circuit of a Ferrodynamic Compensated Ratiometer. <u>T. M. Aliev</u>	508	44
High and Ultrahigh Frequency Measurements		
Measurement of Resonant Systems' Q-Factors. <u>N. P. Potapov</u>	511	45
Limiting Intensity of Quartz-Crystal Resonator Oscillations. <u>I. D. Bryzhev</u>	514	48
Measuring the Parameters of Insulating Materials in the Meter and Decimeter Wavelength Ranges. <u>S. L. Epshtein</u>	518	49
Measuring the Depth of Amplitude-Modulation Factors by Means of Cutoff Attenuators. <u>P. A. Shpan'yan and T. P. Sagarda</u>	518	51

(continued)

Available From ISA

CONTENTS (continued)

	PAGE	RUSS. PAGE
REVIEWS AND REPORTS		
Determination of the Humidity of Air and Gases. <u>K. I. Sevast'yanova</u>	520	53
INFORMATION		
New High-Precision Measuring Instruments. <u>P. P. Arapov</u>	523	55
GKLs of the State Committee. <u>V. A. Budzis</u>	526	58
OBITUARY		
<u>Andrei Georgievich Kasatkin</u>	529	60
CRITICAL REVIEWS		
Unsatisfactory Book. <u>P. N. Agaletskii, Yu. I. Iorish, and N. P. Raevskii</u>	530	61
THE USSR STATE COMMITTEE OF STANDARDS, MEASURES, AND MEASURING INSTRUMENTS		
Measures and Measuring Instruments Approved by the State Committee as the Result of State Tests, and Passed for Use in the USSR	533	63

Available From ISA

Measurement Techniques

*A translation of Izmeritel'naya Tekhnika, a publication of the
Academy of Sciences of the USSR
(Russian Original Dated July, 1963)*

1963, No. 7, pp. 539-630

December, 1963

CONTENTS

	PAGE	RUSS. PAGE
New Stage in the Development of Metrology and Standardization in Instrument-Making. <u>A. I. Ivlev</u>	539	1
LINEAR MEASUREMENTS		
Cathetometer KM-8. <u>F. M. Danilevich and V. A. Nikitin</u>	544	5
Instrument for Measuring Internal Threads. <u>V. I. Shagun and E. I. Fel'dstein</u>	547	7
MPP-2 Measuring Microscope Testing. <u>N. V. Sergeev</u>	551	11
Universal Device for Testing Indicating and Hole Gauges. <u>A. I. Yufarev</u>	551	11
MEASUREMENT OF MASS		
Determination of the Optimum Scale Factors and Variations in the Readings of Scales. <u>S. I. Toropin</u>	553	11
ELECTRICAL MEASUREMENTS		
Information Characteristics of Electrical Measuring Instruments. <u>B. M. Pushnoi</u>	557	14
Evaluating the Efficiency of Automatic Control Systems. <u>L. G. Dubitskii</u>	561	17
Main Features of Digital Measuring Instruments. <u>Yu. A. Popov</u>	567	20
Determining Errors in Digital Instruments with Digit-by-Digit Balancing. <u>V. P. Kotel'nikov</u>	570	23
Frequency-Subtracting Circuits for Frequency to Digit Converting Instruments. <u>V. G. Knorring</u>	573	25
Special Digital Voltmeter. <u>N. I. Gorenlikov, I. F. Klistorin, G. G. Matushkin, and V. G. Strukov</u>	579	30
New Design Method for Electrostatic Digital Voltmeters. <u>A. N. Gutrova</u>	581	32
Double-Coil Ferrodynamic Ratiometer Used as a Phase Null Detector. <u>A. P. Kotyuk</u>	584	35
HIGH AND ULTRAHIGH FREQUENCY MEASUREMENTS		
Set of High-Frequency Permeameters for Determining the Permeability and Loss Angle of Ferromagnetic Materials. <u>A. L. Grokholskii and A. F. Kugayevskii</u>	586	36
Effect of Oscillator Harmonics on the Precision of Measuring the Voltage Standing Wave Ratio by Means of Measuring Lines. <u>V. P. Petrov</u>	588	38
Waveguide Version for Applying an H_{11} Wave in Measuring Parameters of High-Loss Dielectrics. <u>E. B. Zal'tzman</u>	590	39
LIQUID AND GAS FLOW MEASUREMENTS		
Selecting a Type of Ultrasonic Flowmeter for Polluted Liquids and Pulps. <u>G. I. Birger</u>	593	41
Vibration of Gas in Pipes and Measurement of Its Flow. <u>S. I. Sergeev</u>	596	43
Practical Method for Calibrating Rotameters. <u>L. L. Boshnyak</u>	599	46
RADIATION MEASUREMENTS		
Volt-Ampere Characteristics of a Plane-Parallel Ionization Chamber. <u>V. S. Shevrev and A. B. Dmitriev</u>	605	50
Problem of Classifying Relay Devices with Nuclear Radiation Sources. <u>A. G. Vasil'ev, I. S. Zhitomirskii, and K. S. Klempner</u>	609	53

(continued)

Available From ISA

CONTENTS (continued)

IZMERITEL'NAYA TEKHNIKA, No 7, 1963.

RUSS.
PAGE PAGE

REVIEWS AND REPORTS

Optomechanical Instruments for Controlling the Linearity and Coaxiality of Large-Size Products. E. I. Rozenberg 614 57

INFORMATION

Conference on Interchangeability, Precision and Control Methods in Engineering. E. I. R. 617 59

ADVICE 619 60

STATE COMMITTEE OF STANDARDS, MEASURES AND MEASURING INSTRUMENTS

OF THE USSR

Measures and Measuring Instruments Which Have Passed State Tests and Have Been Granted

Temporary Production Rights. 624 63

New Instructions for Testing Measures and Measuring Instruments. 626 64

Available From ISA

BULLETIN OF THE
ACADEMY OF
SCIENCES, USSR
DIVISION OF
CHEMICAL SCIENCE

(IZVESTIYA AKADEMII NAUK SSSR
A translation of OTDelenie Khimicheskikh Nauk
A publication of the Academy of Sciences of the USSR
© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Number 2

February, 1963

CONTENTS

	P A G E
	ENG. RUSS.
INORGANIC AND ANALYTICAL CHEMISTRY	
The Hydrates of Sodium Metasilicate Peroxyhydrates — I. I. Vol'nov and A. N. Shatunina	186 201
Barium Celsian Alumina (Gallo) Silicates (Germanates) of Variable Composition BaO · (Al _m Ge _{1-m}) ₂ O ₈ · 2(Si _n Ge _{1-n})O ₄ — R. G. Grebenshchikov	189 205
An X-Ray Diffraction Study of the Dehydration of 12-Silicotungstic and 1 ⁿ -Phosphomolybdc Acids — A. A. Babad-Zakhryapin	197 215
The Use of Gas-Liquid Chromatography to Analyze Mixtures of Esters of Some Aliphatic Dibasic and Cyclopentane Carboxylic Acids — B. A. Rudenko and V. F. Kucherov	201 220
PHYSICAL CHEMISTRY	
Adsorption of the Racemic Mixture and the (+) Isomer of Butanol-2 on Stereospecific Silica Gels — B. I. Klabunovskii, A. B. Agromov, L. M. Volkova, and A. A. Balandin	208 228
Electrode Reaction Kinetics as Affected by the Adsorption of Reduced Substances, Communication 2. Electrochemical Behavior of Benzyl Chloride — G. A. Todoradze, A. B. Ershler, and S. G. Mairanovskii	214 235
Conjugation Factors in Cyclic Systems. Communication 6. Application of Polarography and Potentiometry to the Study of Electron Interaction Effects in Cyclohexadiene- 1,2-dicarboxylic Acids and Methyl Esters — S. G. Mairanovskii, N. Ya. Grigor'eva, N. V. Barashkova, and V. F. Kucherov	219 240
Kinetics and Mechanism of the Hydrolysis of Dichlorides of Carboxylic Acids, Communication 1. Reaction Rate as a Function of Polarity of the Medium — S. G. Èntelis, R. P. Tiger, È. Ya. Nevel'skii, and I. V. Èpel'baum	223 245
Determination of Rate Constants for the Decay of Initiators and Initiation Efficiency — Z. I. Kulitski, L. M. Terman, V. F. Tsepakov, and V. Ya. Shiyapintokh	230 253
The Crossed Polarized Metallic Thread Method for Determining Zero Charge Points — T. N. Voropaeva, B. V. Deryagin, and B. N. Kabanov	234 257
The Laws Governing the Formation of Electrolytic Iron Powders — A. T. Vagramyan and V. N. Kudryavtsev	239 263

(continued)

Available From CB

CONTENTS (continued)

	RUSS. PAGE	PAGE
ORGANIC AND BIOLOGICAL CHEMISTRY		
Polymerization of Monoallyl Silicon Derivatives in Presence of the Catalyst System ($1-C_4H_9)_3Al + TiCl_4$ — A. V. Topchiev, N. S. Nametkin, Ch'iu Hsiao-p'ei, S. G. Durgar'yan, and V. I. Zav'yalov	244	269
Synthesis and Reactions of 1-(Chloromethyl)-1-Methylsilacyclopentane — V. M. Vdovin, N. S. Nametkin, K. S. Pushchovaya, and A. V. Topchiev	250	274
Telomerization of Cyclodimethylsiloxanes. Communication 5. Reactions with Terfunctional Compounds — K. A. Andrianov, V. V. Severnyi, and B. A. Ismailov ..	256	282
Stability of Cyclomethylphenylsilazanes and of $\alpha,\alpha,\alpha,\omega,\omega,\omega$ -Hexamethylpolydimethyl- silazanes to Hydrolysis — K. A. Andrianov and G. Ya. Rumba	264	290
Synthesis of Cyclodimethylsiloxanes Containing Functional Groups in the Ring — K. A. Andrianov, Lora M. Volkova, and L. M. Tartakovskaya	268	294
Synthesis of DL-Cysteic and 3-Sulfoacrylic Acids from 1,1,1,3-Tetrachloropropane — R. Kh. Freidlina and B. V. Kopylova	272	298
Organophosphorus Derivatives of Ethylenimine. Communication 5. Uni- and Multi- Functional Monomers — N. P. Grechkin and I. A. Nuretdinov	275	302
Hydrolysis of 1,1,1-Trihaloalkanes and 1,1-Dihalo-1-Alkenes with Water at 250-330° — Sh. A. Karapetyan, N. V. Kruglova, and R. Kh. Freidlina	280	307
Addition of Some α -Halo Ethers to Unsaturated Compounds — B. A. Arbuzov and O. N. Nuretdinova	284	311
Reduction of Carboxylic Ester to Aldehydes with Diisobutylaluminum Hydride — L. I. Zakharkin and I. M. Khorina	288	316
Preparation and Isomerization of Dialkyl, Diaryl, and Alkylene 2-(2-Chloroethoxy)-1- (Chloromethyl)Ethyl Phosphites — V. K. Khairellin and T. I. Sobchuk	291	320
Microbiological Transformations of Steroids. Communication 2. Reduction of 17 α ,21-Dihydroxy 20-Keto Steroids with the Aid of <i>Actinomyces albus</i> 3006 — Leonid M. Kogan, I. V. Uleslo, G. K. Skryabin, N. N. Suvorov, and I. V. Torgov ..	298	328
Syntheses of α -Substituted β -Keto Esters — C. D. Nenitzescu, A. M. Glatz, M. Gavet, and I. Pogany	301	332
Effect of Steric Factors on the Keto-cis-trans-Enol Equilibrium of α -Acetylcyclo- alkaneacetic Esters — M. I. Kabachnik and S. T. Ioffe	307	339
Investigation in the Thiophthene Series. Communication 1. Search for Ways of Synthesizing Substituted Thiophthenes — Ya. L. Gol'dfarb and V. P. Litvinov	310	343
Investigation in the Thiophthene Series. Communication 2. Cyclization of Substituted (Thienylthio)Acetic Esters and Some Reactions of 2-Ethylthiophthene — Ya. L. Gol'dfarb and V. P. Litvinov	317	352
Free-Radical Addition of Chloroacetic Acid and of Methyl Chloroacetate to α -Olefins — G. I. Nikishin, R. I. Mustafaev, and A. D. Petrov	323	359
Carbon-Chain Polymers and Copolymers. Communication 51. Graft Copolymers from Aliphatic ω -Hydroxy Carboxylic Acids and the Copolymer of Styrene with 7-Methacrylamidoheptanoic Acid — G. T. Gurgenidze, G. S. Kolesnikov, and Li Feng-ying	328	365
Antimonous and Chloroantimonous Polyesters — G. S. Kolesnikov, S. L. Davydova, A. M. Shmal'ts, and N. A. Shalina	331	368
BRIEF COMMUNICATIONS		
Phase Diagram of the System $MgAl_2O_4-NdAlO_3$ — N. A. Toropov and N. A. Sirazhiddinov ..	335	374
Thermal Reactions of Dihydrofurans — P. I. Shul'kin, I. F. Bel'skii, and R. A. Karakhanov ..	338	377
The Catalytic Conversion of Amines of the Furan Series Into Homologues of Pynola — N. I. Shul'kin, I. F. Bel'skii, and G. B. Skobtsova	340	378

(continued)

Available From CB

CONTENTS (continued)

	RUSS. PAGE
The Synthesis of Trans-Anti-Trans-1-Keto- $\Delta^{14,18}$ -Hexadecahydrochrysene — V. I. Gunar and S. I. Zav'yalov	342 380
The Question of the Structure of the Anions of Aromatic Hydrocarbons — Ya. K. Syrkin and V. M. Kazakova	344 382
On the Question of the Existence of Different Tautomeric Forms of Phenylhydrazones — R. R. Shagibullin, F. K. Sattarova, T. V. Troepol'skaya, and Yu. P. Kitaev	347 385
Dimerization of Butadiene to Cis,Cis-Cyclooctadiene-1,5 Catalyzed by π -Complexes Containing Nickel — L. I. Zakharkin and G. G. Zhigareva	349 386
The Polymerization of Pyridine — V. P. Kovaleva, D. A. Topchiev, V. A. Kabanov, and V. A. Kargin	350 387
The Reaction of Phenylacetylene with Trichlorosilanes — V. F. Mironov and N. G. Maksimova . .	351 387
A Total Synthesis of Camolenic Acid — L. D. Bergel'son, E. V. Dyatlovitukaya, and M. M. Shemyakin	352 388

Available From CB

NEWS OF THE ACADEMY OF SCIENCES USSR

DEPARTMENT OF TECHNICAL SCIENCES

TECHNICAL CYBERNETICS

No 5, 1963

[Following is the translation of the Russian-language publication Izvestiya Akademii Nauk SSSR, OTN, Tekhnicheskaya Kibernetika (English version above) Moscow, No 5, Sep-Oct 1963, pp 1-176.]

TABLE OF CONTENTS

	<u>Source</u>	<u>Report</u>
1. <u>Akmal' Ivanovich Berg, A. A. Kharkevich, V. I. Siforov, A. A. Raspletin, N. D. Gevyatkov, M. S. Ryazanskiy, V. N. Avdayev, V. V. Tikhomirov.</u>	3	1
2. <u>On the Theory of Complex Systems, N. P. Buslenko, (Moscow)</u>	7	6
3. <u>Entropy Stability of Linear Automatic Control Systems, A. A. Krasovskiy, (Moscow)</u>	19	23
4. <u>On a Class of Canonical Forms of Presentation of Three-Valued Functions, Z. L. Rabinovich, Yu. L. Ivas'kiv (Kiev).</u>	27	34
5. <u>Conversions of Logical Systems of Algorithms by Using Contact-Relay Models, V. M. Ozernoy (Moscow)</u>	35	45
6. <u>Logical Diagrams of n-Entry Half-Adders and Their Use in the Conversion of Reflex Binary Code into True Representation, G. R. Firdman, (Leningrad)</u>	43	57
7. <u>Optimum Linear Pre-Distortion and Correction, I. A. Ovseevich, M. S. Pinsker, (Moscow)</u>	54	73
8. <u>Optimal Energy Distribution from the Point of View of Signal Detection in Noise and Simultaneous Measurement of Signal Parameters, V. P. Perov, (Leningrad)</u>	62	84

(continued)

Available From JPRS 22648

<u>TABLE OF CONTENTS (cont.)</u>		<u>Source</u>	<u>Report</u>
9.	<u>The Development of Information Theory in the USSR</u>	74	104
	Part I. General Review of the Works, V. J. Siforov, B. S. Tsyvakov.	74	104
10.	Part II. Mathematical Fundamentals of Information Transmission Theory, M. S. Pinsker.	81	111
11.	Part III. Coding Theory. An Investigation of Error Probability for Optimum Transmission Methods, R. L. Dobrushin.	84	118
12.	Part IV. The Theory of Optimum Methods of Radio Reception, L. S. Gutkin.	89	125
13.	Part V. The Theory of Optimum Transmission Along a Channel with Fading and New Methods of Transmission, N. T. Petrovich, L. M. Fink.	95	136
14.	Part VI. The Theory of Picture Transmissions, B. F. Tsybakov.	98	149
15.	Part VII. The Theory of Shape Recognition and Training Systems, M. A. Ayzerman, E. M. Braverman, A. A. Letichevskiy, V. A. Kovalevskiy, V. M. Glushkov.	102	156
16.	Part VIII. Application of Information Theory to Mathematical Statistics, Yu. V. Linnik.	103	164
17.	Part IX. The Application of the Theory of Random Processes to Radio Technology, B. R. Levin.	107	166
18.	Part X. Mathematical Theory of Random Functions, A. M. Yaglom.	112	177
19.	Part XI. Some Works on the Theory of Information Transmission in Guidance and Control Systems, V. A. Il'lin, G. A. Shastova.	114	189
20.	A Mathematical Model of an Analyzer of Technological Situations for the Selection of Optimum Installation Conditions for Separation of Mixtures, O. V. Golosov, V. F. Levedkin, I. S. Makhlin, (Moscow)	121	193

(continued)

Available From JPRS 22646

TABLE OF CONTENTS (cont.)

		<u>Source</u>	<u>Report</u>
21.	<u>The Presentation and Solution of a Problem in Non-Linear Mathematical Programming</u> , P. T. Reznikovskiy, V. R. Rybasov, V. A. Chayanov, (Moscow)	133	205
22.	<u>On Increasing the Reliability of an Apparatus by Means of Combining General Holding in Reserve by Replacement and Separate Reserving with a Constantly Connected Reserve</u> , A. M. Polovko, M. K. Zaynashev, (Leningrad)	141	226
23.	<u>On the Synthesis of an Optimal Control System</u> , V. M. Ponemarev, (Leningrad)	149	240
24.	<u>Investigation of an Automatic System of the Third Order which is Optimum in the Sense of Stopping Time from an Established Speed</u> , L. P. Smol'nikov, Yu. A. Bychkov, Ye. F. Volkov, (Leningrad).	157	269
25.	<u>The Use of Commutated Phase Shift Filters in an Automatic Control System with Variable Structure</u> , F. V. Yemel'yanov, V. A. Taras, (Moscow).	164	284
26.	<u>On the Influence of Power Supply Coupings on the Behavior of Automatic Control Systems</u> , V. I. Ivanenko, (Kiev)	171	298
27.	<u>Symposium on Multi-Extremal Problems</u>	175	306

Available From JPRS 22648

IZVESTIYA AKADEMII NAUK SSSR, SERIYA FIZICHESKAYA, Vol XXVII, No 1, 1963.
 Bulletin of the Academy of Sciences of the USSR - Physical Series
 Vol. 27, No. 1 - January 1963

TABLE OF CONTENTS

	Page
	Orig. Trans.
Transactions of the Fourteenth Conference on Spectroscopy (Continued from Vol. 26, Nos. 7 & 10; to be concluded in Vol. 27, No. 7)	
New data on spectroanalysis with preliminary contact-spark transport of the material - V.S.Baskov, S.I.Berger, M.G.Mal'tsev, M.N.Pal- ladin & K.I.Taganov	2 3
Thermochemical processes occurring under the conditions of spectro- scopic analysis - N.F.Zakhariya, O.P.Turulina & N.A.Fuga	4 5
Electric discharge sampling for constructing working curves for analysis of metals and alloys - E.S.Obukhova, N.K.Rudnevskii & K.I.Taganov	6 7
Concerning air injection of powders into the arc in analysis of ores - A.K.Rusanov & N.T.Batova	8 9
Investigation of the fine structure of the fluorescence spectra of polycyclic aromatic hydrocarbons as a method of analysis of carcinogenic substances - P.P.Dikun	9 11
Absorption and luminescence spectra of stilbene and diphenyl acetylene in frozen solutions at 77°K - G.V.Gobov	11 13
Concerning appearance of free radicals of the triphenylmethyl series - Yu.I.Kozlov & D.N.Shigorin	14 18
Effect of scattered light on the results of measurements of lumines- cence spectra - V.P.Klochkov	17 21
Measurement of the half-width of the apparatus function of a mono- chromator in the infrared region by means of the transmission spectrum of a double Fabry-Perot etalon - A.F.Vasil'ev	19 23
Measurement of the intensity and width of absorption bands in the infrared region - A.G.Finkel'	22 26
Spectral and energy characteristics of total internal absorption filters taking into account their geometric dimensions - L.V.Iogansen	24 29
Infrared dispersion filters (Christiansen filters) - I.F.Gurinovich & N.A.Borisevich	26 31
Investigation of the absorption of optical crystals in the infrared in the temperature range from 93 to 693°K - I.S.Pominov & A.L.Stolov	29 34
Spectroscopic determination of the isomeric composition of reaction products - Ya.V.Rashkes	32 37
Investigation of decomposition of nitric oxide by absorption spectro- scopy - V.N.Ivanov	35 40
Spectroscopic investigation of reaction of dyes with hydrazine - A.T.Vartanyan	37 42
Use of vibrational spectra for studying the mechanism of auto-oxidation of benzaldehyde - A.N.Sevchenko, Yu.A.Ol'dakop, I.P.Zyat'kov & G.S.Bylina	41 46
Spectroscopic investigation of oxidation of vitamin C and its stabili- zation by vitamin B ₁ - G.Ionaitis & B.Rubikaite	45 48
Variation of the absorption spectra of solutions of vitamins B ₁ and C as a function of the concentration and solvent - G.Ionaitis & B. Rubikaite	47 51

(continued)

Available From CTT

CONTENTS (Contd)

Prototropic regrouping in the dipyrromethene series - L.D.Miroshni- chenko & R.P.Kvastigneeva	50	54
Ultraviolet absorption spectra of hydroxy- and methoxyphenyldiazonium chlorides - L.A.Kamitsyna, O.A.Reutov, B.S.Kikot' & B.V.Rassadin	53	57
Infrared spectra and structure of δ -keto acids - Yu.A.Pentin, I.S. Trubnikov, R.B.Tepinskaya, N.P.Shusherina & R.Ya.Levina	55	59
Ultraviolet absorption spectra of some 2,5-substituted furans - A.D. Peshekhonova, A.A.Ponomarev & M.D.Lipanova	58	62
A spectroscopic method for investigating high-molecular compounds and its potentialities - M.V.Savost'yanova & V.A.Chernyshev	62	66
Effect of temperature on the vibrational spectra of naphthalenes - A.V. Sechkarev & R.S.Lebedev	65	69
EPR spectrometer - V.B.Lebedev	69	73
Investigation of the structure of some intracomplex compounds by the method of electron paramagnetic resonance - B.V.Lokshin, A.K. Piskunov, L.A.Kamitsyna & D.N.Shigorin	75	79
EPR spectra of some gamma-irradiated compounds with multiple bonds - V.I.Smirnova, D.N.Shigorin & T.S.Zhuravleva	78	82
Paramagnetic absorption in potassium chromium sulfate and manganese ammonium sulfate in parallel fields - V.A.Kutuzov	81	85
Influence of intermolecular interactions on the chemical shifts of protons in some organic systems - B.A.Arbuzov, Yu.Yu.Samitov & A.I.Konovalov	82	87
Effect of diffusion on the variation in intensity of proton resonance lines with the concentration of paramagnetic ions - A.A.Popel' & E.D.Grazhdannikov	86	91
Proton magnetic resonance spectra of some substituted dioxolanes - B.A.Arbuzov, Yu.Yu.Samitov & L.K.Yuldasheva	89	95
Concerning pulse magnetic and acoustic spectroscopy - U.Kh.Kopvilem & R.M.Mineeva	93	98
Magnetic and acoustic spectroscopy for structural analysis of high- melting crystals - U.Kh.Kopvilem	95	101
Determination of methyl and methylene groups in narrow paraffin and paraffin-naphthene fractions from their infrared absorption spectra - S.I.Krasnova, A.F.Mal'nev, G.A.Puchkovskaya & V.T.Sklyar	98	104
Results obtained in studying Uzbekistan petroleums by Raman spectro- scopy - E.G.Burova & G.Kh.Khodzhaev	100	106
Spectroscopic investigation of the individual hydrocarbon composition of ligroins from Tatar petroleums - B.Le & F.A.Urmanceev	102	108
Characterization of solid petroleum paraffins by their infrared ab- sorption in the 700 cm^{-1} region - A.N.Guseva, L.D.Ashkinadze & I.E.Leifman	104	111
Investigation of tarry substances from petroleums by infrared absorp- tion spectroscopy - E.Va.Yatsenko, V.G.Gutsalyuk & S.R.Rafikov	107	114
Geochemical characterization of bitumens on the basis of their infra- red absorption spectra - S.S.Geiro	110	117
Reports presented at the Fourteenth Conference on Spectroscopy that are being published in Zavodskaya Laboratoriya (Trans. Industrial Laboratory)	114	121

(continued)

Available From CTI

CONTENTS (Contd)

Transactions of the Twelfth Annual Conference on Nuclear Spectroscopy
(Concluded from Vol. 28, Nos. 2, 8, 9 & 12)

Radiative transition probabilities in odd and in odd-odd deformed nuclei - M.E.Voikhanskii	118	126
Investigation of isomeric periods in the 10^{-4} to 10^{-1} sec range in even-even nuclei - V.V.Remeev, Yu.S.Korda & A.P.Klyucharev	125	133
Beta-stability of heavy elements - N.N.Kolesnikov, A.P.Krylova & V.K.Kandybarov	132	139
Some new data on the mechanism of production of light nuclei under proton bombardment - A.K.Lavrukhina, L.P.Moskaleva & R.I.Kuznetsova	137	144
Investigation of continuous spectra of neutrons and gamma-rays by the method of counting efficiencies - G.G.Doroshenko & A.V.Larichev	141	148

Available From CTT

IZVESTIYA AKADEMII NAUK SSSR SERIYA GEOFIZICHESKIYA

English Edition of
Bulletin (Izvestiya), Academy of Sciences, USSR, Geophysics Series No. 8, 1963

CONTENTS

	Page	
	English	Russian
PHYSICS OF THE SOLID EARTH		
I. S. BERZON, The Amplitude Ratio of Converted PS Waves Reflected from beyond the Critical Angle and PPS Head Waves	699	1149-1170
T. B. YANOVSAYA, Calculation of Upper Mantle Velocity Profiles from a Seismic Wave Travel-Time Curve as an Inverse Mathematical Problem	711	1171-1177
V. G. GRATINSKII, The Kinematics of Wave Fronts in Well Logging Employing Distributed Transducers	715	1178-1197
M. P. VOLAROVICH, D. B. BALASHOV, I. S. TOMASHEVSKAYA AND V. A. PAVLO-GRADSKII, A Study of the Effect of Uniaxial Compression Upon the Velocity of Elastic Waves in Rock Samples Under Conditions of High Hydrostatic Pressure	728	1198-1205
V. N. STRAKHOV, The Reduction of the Problem of Analytic Continuation in a Horizontal Layer to that of the Solution of Convolution-Type Integral Equations of the First Kind with Rapidly Decreasing Kernels	733	1206-1221
L. L. VAN'YAN, The Electromagnetic Field of a Harmonic Dipole Grounded at the Surface of a Multilayered, Anisotropic Medium	740	1222-1224
V. N. PONOMAREV AND I. I. GLUKHIIKH, The Problem of the Determination of Iron Composition in Magnetite Ores Based upon the Magnitude of Their Magnetic Susceptibility	742	1225-1229
A. YA. VLASOV AND A. G. ZVEGINTSEV, On the Temperature Hysteresis of the Magnetization of Magnetite	746	1230-1233
SCIENTIFIC REPORTS		
YU. V. KHOMEINYUK, A Generalized Transient Characteristic and its Application in Direct and Inverse Problems of the Transient-Process Method for Certain Bodies Embedded in Nonconducting Media	749	1234-1237
A. D. SYTINSKII AND K. I. CHUKANIN, Atmospheric Circulation in the North Atlantic and Microseisms at Pulkovo	752	1238-1239
PHYSICS OF THE SEA AND OF THE ATMOSPHERE		
S. A. KITAIGORODSKII AND S. S. STREKALOV, On the Analysis of Spectra of Wind-Generated Wave Motion. II	754	1240-1250
V. S. LATUN, On the North-South Deep Water Current below the Zero-Flow Surface	761	1251-1258
N. G. VASYUKOVA, On the Turbulent Thermal Conductivity Coefficient in the Japan Sea	766	1259-1269
V. I. SKATSKII AND V. V. SHCHELOKOV, An Airborne Installation for Complex Measurement of Meteorological and Dynamical Characteristics of the Atmosphere, Including Clouds	772	1270-1277
I. I. VERNIDUB, A. S. ZHIRKAREV, KH. KH. MEDALIEV, N. S. PRAVDIN, G. K. SULKAVELIDZE AND G. G. CHUMAKOVA, Ice-Forming Properties of the Aerosols of Lead Iodide Obtained by Burning of Metalloiodide Compounds	777	1278-1284
SCIENTIFIC COMMUNICATIONS		
S. L. ZUBKOVSKII, An Experimental Investigation of the Spectra of Pulsations in Vertical Component of the Wind Velocity in the Free Atmosphere	782	1285-1288
B. YA. SLOBODOV, An Analysis of the Oscillations in the Altitude of the Tropopause Caused by Nonadiabatic Factors in the Variation of the Vertical Temperature Gradient	785	1289-1290

Available From AGU

TABLE OF CONTENTS

N. P. Korobeynikov, On the Calculation of the Aerodynamic Characteristics of Thin Curved Bodies and Curved Surface Wings	1
M. Z. Litvin-Sedoy, The Calculation of the Kinetic Energy of a System of Linked Bodies	16
A. I. Matyazh, An Experimental Investigation of the Effectiveness of Certain Types of Flat-Stream Discharge of Gas onto a Profile with a Flap	26
V. V. Yershov, Symmetrical Bending of Nonsymmetrically Constructed Sandwich Plates with Lightweight Cores	42
S. N. Kan and A. V. Silant'yev, Calculations for Torsion in Fuselage in Region of Wing Midsection	64
Yu. S. Matyushev, Calculation of the Strength of Conical Shells of the Wing with Small Aspect Ratio Type	82
B. G. Khudenko, Application of Potential-Flow Scheme of an Ideal Fluid to Calculation of an Airstream with a Region of Backflow	95
A. F. Akhmerov and I. F. Parkhomenko, On the Problem of Determining the Technological Parameters in the Bending and Stretching of Profile Parts	113
A. S. Shevelev and G. P. Fedorchenko, Determination of Placement Errors of Surface in Machining Components	121
Z. I. Burman, Flutter Calculations for Towed Glider Taking Account of Three Degrees of Freedom	136
N. I. Gur'yev, Calculations of Cylindrical and Prismatic Shells by the Method of Discrete Unknowns	148
I. N. Lanin, Approximate Construction of Streamlines Around a Given Profile in a Subsonic Stream with a Local Supersonic Region Terminated by a Compression Shock	151
A. F. Moiseyenko, Mutual Annular Wing-Body Interference with Consideration of Compressibility of Fluid	163

Available From FTD-TT-62-1111

The Following pages are not included in the above cover-to-cover translation.

pp 31-37 FTD-TT-62-3	9677360
pp 69-77 FTD-TT-61-239	9672813
pp 73-88 FTD-TT-61-204	9673084
pp 100-112 FTD-TT-61-44	9671656

AVIATION ENGINEERING

No 2, 1963

- USSR -

[Following is a complete translation of the Russian-language journal Izvestiya Vissikh Uchebnykh Zavedeniy MViSSO SSSR, Seriya "Aviatsionnaya Tekhnika," No 2, 1963 (English version above), Kazan', pages 3-141.]

Table of Contents

	Page
Zarubin, V.S. On the Maximum Time Interval in the Numerical Calculation of Kinetic Heating	1
Ivlentiayev, V.S., and Filippov, G.V. A State of the Over-flowing of Gas in Connecting Vessels	7
Sirazetdinov, T.K. Optimum Problems in Gas Dynamics	11
Yasinskiy, F.G. Approximation Calculations of the Heating of a Metallic Skin with an Outer Layer of Heat Insulation	24
Anisimov, A.M. Axially Symmetrical Oscillations of a Spherical Shell Filled with Fluid	33
Kan, S.N. and Lipovskiy, D.Ye. The Carrying Power of Framework Thin-Walled Round Cylindrical Shells Under Compression	40
Sachenkov, A.V. On the Calculation of the Stability of Flat Plates	52

(continued)

Available From JPRS 22668

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY MViSSR, SERIYA AVIATSIONNAYA
TEKHNika, No 2, 1963.

Table of Contents (Cont'd)

	<u>Page</u>
Bodunov, M.N. Calculation of the Temperature Distribution Throughout the Profile of Turbine Blades with Internal Air Cooling	59
Vinogradov, B.S. and Shaykhutdinov, Z.G. An Approximation Method of Calculating a Detached Bow Wave in the Streamlining of Blunt Bodies by a Supersonic Flow	72
Dolomanov, Ye. G. On the Calculation of the Parameters of the Air Behind a Direct Shock Wave with a Consideration of the Stagnation Temperature Inversion	78
Zaryankin, A. Ye. Calculation of Losses in Annular Axially Symmetric Diffusors of the Exhaust Ducts of Turbine Machines	85
Lekay, V.I. Temperature of Cooled Turbine Blades in a Non-Uniform Gas Field	95
Lyshevskiy, A.S. Variation in the Velocity Distribution in an Unbroken Circular Jet of a Fluid	106
Ovsyannikov, B.V. The Connection of the Wheel Head of a Radial Impeller Machine with the Moment of Inertia of the Coriolis Forces	113
Sozin, Yu. A. Heat Transfer in a Pulsating Flow of an Incompressible Fluid	126
Tunakov, A.P. Calculation of the Arbitrary Regime of a Radial-Axial Turbine	137

Technical Notes

Bulygina, Ye.V. A Minimum-Drag Self-Balancing Profile	145
Kostychev, G.I. Necessary Conditions of the Extremum for one Variation Problem with a Distribution Parameter	153
Kolchanov, R.A. Selection of the Parameters of a Multistage Rocket	166
Editorial Collegium. Attention to Authors: International System of Units of Measurements Adopted for this Journal	173

Available From JPRS 22668

AVIATION ENGINEERING

No 3, 1963

- USSR -

[Following is the complete translation of the Russian-language publication Izvestiya Vysshikh Uchebnykh Zavedeniy, Seriya "Aviationskaya Tekhnika," (News of Higher Educational Institutions, Aviation Series), No 3, 1963, Ministry of Higher and Secondary Specialized Education USSR, Kazan', pages 3-130.]

<u>TABLE OF CONTENTS</u>	<u>Page</u>
Hypersonic Flying Vehicle with Self-Balancing Surface	1
Optimization of the Flight Regions and Parameters of Composite (Multistage) Rockets	11
Temperature Field of a Plate with a Heat Transfer Coefficient and Ambient Medium Temperature Varying Arbitrarily with Time	25
Solution of the Differential Equations of Motion of a Viscous Fluid in a Conical Diffusor and Between Two Cones Without Taking Account of Inertial Terms	36
On Optimum Motion Regions of Flying Vehicles	44
Aerodynamic Characteristics of Profiles and Wings with Blunt Leading Edges at Hypersonic Speeds	56
(continued)	

Available From JPRS 22703

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, SERIYA AVIATSIONNAYA
TEKHNIKA, No 3, 1963.

CONTENTS (Contd)

On an Approach to the Problem of Buckling of an Infinite Strip During Shear	68
On the Question of Overheating of Radial Seals of Whirling Shafts	72
Computational Method and Results of an Experimental Investigation of a Turbine Bucket with Air Cooling	77
On the Most Advantageous Temperature Field of the Gas Ahead of a Turbine	96
Pumpage in a Complex Network	108
Experimental Investigation of Convective Heat Transfer in a Pulsating Incompressible Fluid Flow	121
On the Mechanism of Combustion in the Turbulent Flow of a Well-Mixed Mixture	128
Technical Notes: Determination of the Geometric Dimensions of Sealing Elements of Hydraulic and Pneumatic Aggregates by Means of O-Shaped Rubber Rings	140
On the Question of the Nonstationary Exhaust in a Narrowing Channel During Maximum Discharge	161
Determination of the Fluid Residue on Internal Walls and Internal Reservoirs During Emptying	167
Determination of the Total Error in a Prescribed Direction	173
Attention Reader	182

Available From JPRS 22703

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS
 MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR
 INSTRUMENT BUILDING
 Vol VI, No 3, 1963

[Following is the translation of the Russian-language publication Izvestiya Vysshikh Uchebnykh Zavedeniy, Pri-borostroyeniye (English version above) edited by S. I. Zilitinkovich, Leningrad, Vol 6, No 3, 1963, pp 1-163.]

TABLE OF CONTENTS	SOURCE PAGE	TEXT PAGE
ELECTRO-METERING DEVICES		
1. On Separate Measurement of Components of Complex Variables by Equilibration Methods, G. A. Shtamberger.	3	1
2. Investigation of an Inductance Transformer with a Magnetic Circuit of the Striated Type, O. A. Korzhavin.....	10	12
3. Errors in a Rectifying Power Converter Resulting from Distortion in the Shape of the Current and Voltage Curves, O. S. Shvegzhda.....	19	24
AUTOMATION AND COMPUTATIONAL TECHNOLOGY		
4. On Time Delay Considerations for Synthesis of an Automatic System with a Digital Control Device, A. P. Litvinov.....	26	35
5. A Method of Calculating the Quality of Automatic Control Systems Using Nomograms, B. S. Yakovlev.....	36	52
6. Controlled Generators of Time Intervals, A. L. Gurevich, L. I. Kusinov.....	45	67
7. A Device which uses Decatrons for Discrete Counting of Electrical Pulses, V. S. Afonchikov, A. A. Kruglov, A. G. Mikerov.....	55	81
8. On the Problem of Stability for Electric Circuits with Negative Resistance Elements, V. V. Sokolov.....	63	93

(continued)

Available From JPRS 22864

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, PRIBOROSTROYENIYA, Vol VI, No 3, 1963.

CONTENTS (Contd)

SOURCE PAGE	TEXT PAGE
----------------	--------------

GYRO AND NAVIGATIONAL INSTRUMENTS

9. On Oscillation of a Gyro Pendulum with a Movable Point of Reference in a Non-Uniform Field of Gravity M. V. Litvin-Sedov.....	68	102
10. On the Problem of Ballistic Deviations of a Gyro-compass which does not have Velocity Deviations M. M. Bogdanovich.....	77	115
11. On Determination of the Drift of Float Integrating Gyroscopes without the use of a Dynamic Stand, G. A. Slomyanskiy.....	85	126

PRECISION MECHANICS

12. Investigation of an Electro Mechanical Trigger Regulator with a Potential Actuator. V. M. Aksel'rod..	96	144
13. On a Means of Investigating Regulators with Tenacious Friction, G. I. Me'nikov.....	107	158

OPTICAL INSTRUMENTS

14. On The Design of an Aplanatic System Consisting of Two Nonspherical Surfaces of Higher Order, N. M. Rasinov.....	115	170
15. The Use of Special Diagrams for Design of Isoplanatic Systems, A. P. Dmidriyev.....	118	174
16.		

THERMAL APPARATUS

16. The Theory of Thermal Conditions of Low Power Transformers, V. N. Cherkasov.....	124	185
17.		

EQUIPMENT PARTS AND MECHANISMS

17. The Determination of Displacement of Mechanisms with Touching Levers, P. A. Levedev.....	134	200
18. Determination of Endurance of Fragile Materials in Models with Variable Cross Sections, L. I. Gurevich	143	212

(continued)

Available From JPRS 22864

CONTENTS (Contd)

SOURCE PAGE	TEXT PAGE
----------------	--------------

TECHNOLOGY OF INSTRUMENT MAKING

19. On Errors in the Shape of Parts Machined by Turning with Radial Feed, M. A. Luzhnikovskaya..... 149 220

SHORT REPORTS

20. A Photoelectric Device for Control of Vacuum Equipment, M. N. Sgibnev..... 161 236

Available From JPRS 22864

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS
MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION
USSR
RADIOPHYSICS SERIES
Vol VI, No 3, 1963

[Following is a translation of the Russian-language journal Izvestiya Vysshikh Uchebnykh Zavedenii MViSSR, Radiofizika, Vol VI, No 3, 1963, (English version above), May-June issue, Gor'kiy, pp 431-647.]

(Note: Illustrations and author's English summary are given at the end of each article. Original source page numbers are given in the left-hand margin of translation.)

TABLE OF CONTENTS

	<u>Page</u>
Radio Emission from the Equatorial Region of the Moon in the 4 mm Band.....	1
Investigation of the Spectrum of the Spatial Frequencies of High-Resolution Radio Interferometers with Account of the Two-Dimensional Character of the Directivity Pattern.....	15
Radiation Line Width in the Complex Doppler Effect.....	40
Absorption of Electromagnetic Wave Incident on a Half Space Filled With Platinum.....	59
	(continued)

Available From JPRS 22922

CONTENTS (Contd)

IZVESTIYA VYSSHIKH UCHEBNIKH ZAVEDENIY MVISSO SSSR, RADIOPHIZIKA, Vol VI, No 3, 1963.

	<u>Page</u>
Parametric Amplification of Transverse Electromagnetic Waves in Plasma With Periodically Varying Electron Concentration.....	67
Scattering of Electromagnetic Waves on Fluctuations in a Plasma, in the Presence of a Magnetic Field.....	84
Spatial Correlation of Fluctuating Electromagnetic Fields in a Plasma. II.....	105
Average Diffraction Pattern in the Focal Plane of a Lens.....	120
Concerning Amplitude and Phase Fluctuations; A Self-Oscillator....	134
Synchronization of an Oscillator by a Random Quasi Monochromatic Signal.....	145
4 nm Maser Using a Formaldehyde Molecule Beam.....	169
Investigation of Efficiency of Optical Pumping in Sodium Vapor....	178
Distribution of the Population of Sodium Atoms by Sublevels of the Ground State Under the Influence of Optical Pumping.....	202
Dependence of Structure of Electromagnetic Shock Waves in Two-Conductor Lines on the Dispersion Characteristic of a System in the Linear Approximation.....	216
Formation of Electromagnetic Shock Waves in Transmission Lines With Unsaturated Ferrite.....	245
Stationary Electromagnetic Shock Waves in Transmission Lines With Unsaturated Ferrite.....	263
Parameters of H-Shaped Waveguide Filled With Dielectric.....	283
Concerning the Propagation of a Quasi- H_{01} Mode in a Cross-Shaped Waveguide.....	300
Excitation of Impedance Strip on an Infinite Screen.....	306
Excitation of Cylinder of Finite Length.....	316
Investigation of Negative-Resistance Generators with Piecewise-Linear Approximation of the Characteristics of the Nonlinear Element.....	339
Processing of Cosmic Radar Signals with Digital Computers by the Method of Frequency Filtering and Storage.....	352

(continued)

Available From JPRS 22922

CONTENTS (Contd)

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY MVISSR SSSR, RADIOFIZIKA, Vol VI,

No 3, 1963.

Page

Concerning the Propagation of Excitation in One-Dimensional Excitable Tissue.....	368
--	-----

Brief Reports and Letters to the Editor

Precision Measurements of the Intensity of the Radio Emission of the Discrete Sources Cassiopelia-A, Cygnus-A, and Taurus- A in the Decimeter Band.....	376
Precision Measurement of the Flux of Radio Emission from the Discrete Source Cassiopelia-A at $\lambda = 3.2$ cm.....	382
Nature of the Material of the Moon's Oceans and Continents.....	384
Heat Flow From the Interior of the Moon.....	390
The Role of the Static Electric Field in the Propagation of Electromagnetic Waves in a Plasma.....	393
Expression for the Depth of Modulation of Interference for Sources of Elliptical Form.....	399
Weakly Damped Oscillations of an Inhomogeneous Plasma.....	405
Acceleration of Charged Particles by Plasma Waves.....	409
Letter to the Editor.....	421

Information

Geomagnetism and Aeronomy, Vol. 3, No. 1, 1963.....	423
---	-----

Available From JPRS 22922

Soviet Physics CRYSTALLOGRAPHY

A Translation of the Journal "Kristallografiya"

(Russian Original Vol. 8, No. 3, pp. 307-496, May-June, 1963)

Vol. 8, No. 3, pp. 241-400

November-December, 1963

CONTENTS

	RUSS. PAGE	PAGE
Symmetry Groups and Groups of the Various Kinds of Antisymmetry. <u>A. M. Zamorzaev</u> (T)	241	307
Crystal Structures with and without Dipoles. <u>V. N. Lyubimov</u> and <u>I. S. Zheludev</u> (T)	248	313
Polar-Polar and Polar-Neutral Crystal Structures. <u>V. A. Kopitsik</u> (T)	249	319
Characteristics of the Structural Changes Involved in Phase Transformations in Antiferroelectrics. <u>I. S. Zheludev</u> and <u>V. N. Lyubimov</u> (T)	255	328
Effects of Spin-Phonon Interaction in a Ferromagnetic on the Debya-Waller Factor. <u>V. N. Kashcheev</u> (T)	269	333
Representation of X-ray Atomic Scattering Factors in Polynomial Form. <u>F. A. Brusentsev</u> ..(E/T)	263	338
The Structure Group of Quartz. <u>N. L. Smirnova</u> and <u>N. V. Belov</u> (T/E)	270	346
An X-ray Study of Some Compounds of Composition $A(B''_x B''''_{2-x})O_6$, $(A''_{0.8} A''''_{0.4})Nb_2O_6$ and $(Ba_{0.4} Sr_{0.4})TiO_3$ (A = Sr, Ba; B'' = Fe, Mg; B'''' = Nb; A'' = K; A'''' = La, Bi). <u>I. G. Imaiazade</u> (E)	274	351
An X-ray Study of Small Distortions of Complex Perovskites. <u>M. F. Kupriyanov</u> and <u>V. S. Filip'ev</u> (E)	278	356
New Data from an X-ray Study of Phase Transformations in Sodium Niobate. <u>I. G. Imaiazade</u> (E)	284	363
Crystal Structure of <i>l</i> -Phenylalanine Hydrochloride. Derivation of a Model of the Structure. <u>G. V. Gurskaya</u> and <u>B. K. Vainshtain</u> (T/E)	288	368
Statistical Derivation of a Model for the Structure of 3,3'-Diethylthiocarboxyanin Chloride, <u>L. G. Veronitsova</u> , <u>Z. V. Zyonkova</u> , and <u>G. S. Zhdanov</u> (E)	292	374
The Structure of CdTe Layers Sublimated onto the Natural Cleavage Surface of NaCl, KCl, and KBr Single Crystals. <u>F. T. Novik</u> , <u>M. A. Rumsht</u> , and <u>T. M. Zimkina</u> (E/T)	295	378
Determination of the Position of Carbon in Cementite by the Neutron Diffraction Method. <u>B. G. Lyashchenko</u> and <u>L. M. Sorokin</u> (T/E)	300	382
The Position of Hydrogen Atoms in Narolite. <u>S. P. Gabuda</u> , <u>A. G. Lundin</u> , <u>G. M. Mikhailov</u> , and <u>K. S. Aleksandrov</u> (T/E)	305	388
Mutual Solubility of Tolane and Mercury Diphenyl in the Solid State. <u>A. I. Kitaigorodskii</u> , <u>R. M. Myasnikova</u> , and <u>V. D. Samarskaya</u> (E/T)	308	393
An Approximate Theory of Quasi-Longitudinal Waves in Crystals. <u>F. I. Fedorov</u> (T)	312	398

Available From Amer Inst of Phys
Sov Phys - Crystal
Vol VIII, No 3

(continued)

CONTENTS (continued)

	RUSS. PAGE	
Study of Dislocation Structure and Dislocation Multiplication in Cadmium Crystals.		
<u>N. A. Tyapunina, A. A. Predvoditelskii, G. K. Martynyuk, and B. G. Shvidkovskii</u> (T/B)	318	405
<u>Dislocation Interaction in Calcite Twinning.</u> <u>V. Z. Bengus</u> (E/T)	322	413
Mechanisms of Growth of Ionic Filament Crystals from Solutions.		
<u>G. V. Berezhkova and V. N. Rozhanskiy</u> (B/T)	327	420
Study of the Surface Structure of Filamentary Iron Crystals. <u>Yu. D. Tropin</u> (E/T)	332	427
Face Morphology of Crystals of Yttrium-Iron Garnet. <u>S. Sh. Gendelev</u> (T/B)	335	431
Growth of Monocrystals of Germanium-Silicon Alloys by the Vertical Recrystallization Zone Method. <u>N. V. Zhimkaya, Z. I. Kir'yashkina, and V. A. Maslov</u> (E)	340	437
An Automatic X-ray Diffractometer with Point Counting and Programmed Operation for the Study of Polycrystalline Samples. <u>E. L. Lube and D. M. Kheiker</u> (E)	343	440
BRIEF COMMUNICATIONS		
The Influence of the Temperature Correction on the Reliability Coefficient in Crystal Structure Analysis. <u>A. V. Nikitin and V. I. Simonov</u> (T/B)	347	448
The Crystal Structures of Beryllium-Rich Compounds in the Systems Mo-Be and W-Be. <u>P. I. Kripyakevich and E. I. Gladyshevskii</u> (E)	349	449
Yttrium Beryllide and Compounds of the Type ABe_12. <u>N. N. Matyushenko and G. F. Tikhinskii</u> (E)	351	451
The Structures of Compounds of Composition AB of Rare Earth Metals with Antimony and Bismuth. <u>R. N. Kuz'min and S. V. Nikitina</u> (E)	354	453
Concerning the Problem of the Transition Region between the Ferroelectric and the Paraelectric Phases of $(Pb, Ba)(Ti, Zr)O_3$ Solid Solutions.		
<u>S. A. Fedulov and Yu. N. Venevtsev</u> (E)	355	454
Electron Diffraction Study of the Structure of Sublimated Layers of ZnS and $ZnS-Mn$.		
<u>S. A. Kostylev and B. N. Sherstyak</u> (E)	357	456
Electron Diffraction Study of the Structure of Monocrystalline Film of Cadmium Selenide.		
<u>I. P. Kalinkin, L. A. Sergeeva, V. B. Aleskovskii, and L. P. Strakhov</u> (E)	360	459
The Crystal Structure of Films of Zinc Sulfide. <u>K. V. Shalimova, N. K. Morozova, and V. S. Soldatov</u> (E)	362	461
Diffuse and Double Bragg Reflection by Polycrystalline Copper.		
<u>V. I. Iversonova and A. A. Karan'kin</u> (E)	364	463
A Fourier Spectrometer with Filters. <u>B. N. Grechushnikov, G. I. Dichter, and I. P. Petrov</u> (T/B)	367	466
Fourier Spectrometer for Working in the Near-Infrared Region of the Spectrum.		
<u>B. N. Grechushnikov, G. I. Dichter, and I. P. Petrov</u> (E)	369	468
Self-Excitation of a Plane Parallel Anisotropic Layer in the Presence of Total Reflection.		
<u>N. S. Petrov, A. M. Goncharenko, and B. A. Sotnik</u> (T)	372	471
Dependence of the Velocity of Ultrasound on the Temperature in Monocrystals of $PbSe$ in the Range 80-840°K. <u>A. A. Chudinov</u> (E)	374	473
The Effect of Electrical Purification on the Decrease in Damping of Quartz.		
<u>A. G. Smagin and V. I. Nikol'skaya</u> (E)	375	475
The Structural Relationships between the Metal and Its Oxide during the Oxidation of Titanium. <u>D. I. Lainer, M. I. Trypin, and A. S. Bai</u> (B)	377	477
Crystallization of Cassiterite (SnO_2) under Hydrothermal Conditions.		
<u>I. P. Kuz'mina and B. N. Litvin</u> (E)	379	478
Optical Orientation of Crystalline Layers with Inclined Cross Sections.		
<u>N. M. Melankholin</u> (E)	381	480
Linear Electrooptical Effect in Crystals of Hexamethylenetetramine (Urotropine), $C_6H_{12}N_4$.		
<u>L. M. Belyaev, O. G. Blokh, A. B. Gil'varg, G. F. Dobrzhanskii, G. B. Netesov, V. A. Shamburov, and L. A. Shuvalov</u> (E)	383	482

(continued)

Available From Amer Inst of Phys
Sov Phys - Crystal
Vol VIII, No 3

CONTENTS (continued)

		RUSS. PAGE	PAGE
DISCUSSION			
The Relation between the Width of Diffraction Maxima and Crystal Sizes. <u>P. A. Bezinganyan and Zh. O. Ninoyan</u>	(T)	385	484
Use of the Fourier Transforms of Approximating Functions in the X-ray Analysis of the Fine Crystal Structure of Polycrystals. <u>V. D. Krylov</u>	(T/E)	387	486
The Problem of Determining the Particle Size and the Microdeformation in a Crystal Lattice from the Data on the Harmonic Analysis of the Shape of the X-ray Diffraction Lines. <u>B. Ya. Pines and I. Ya. Surovnev</u>	(T/E)	390	489
The Method and Precision of the Harmonic Analysis of the Shape of Interference Lines. <u>R. V. Kovalevok and I. V. Smushkov</u>	(T)	394	494

Available From Amer Inst of Phys
Sov Phys - Crystal
Vol VIII, No 3

MICROBIOLOGY

A translation of Mikrobiologiya
(Russian Original Dated January-February, 1963)

Vol. 32, No. 1, pp. 1-186

July-August, 1963

CONTENTS

	RUSS. PAGE	PAGE
November Plenum of the Central Committee of the Communist Party of the Soviet Union	1	3
Interspecific Specificity of Antagonism as a Species Character. N. A. Krasil'nikov, A. I. Korenyako, A. I. Sokolova, N. I. Nikitina, and N. P. Kirillova	4	7
Changes in Some Physiological Requirements of Yeasts as a Result of Adaptation to Streptomycin. N. D. Ierusalimskii, L. A. Shevchenko, and E. V. Grishankova	9	13
Characteristics of Succinic Dehydrogenase Activity of <i>Escherichia coli</i> with Respect to its Resistance to Freeze-Drying. V. M. Kushnarev and V. A. Blagoveshchenskii	12	17
Biosynthesis of Amino Acids by Actinomycetes. A. M. Bezborodov	15	20
A Study of Bacteria Possessing Deoxyribonuclease Activity. R. A. Saimanova and D. V. Yusupova	21	27
Occurrence of Hydrocarbon-Oxidizing Bacteria in Waters of the Izbakent Oil and Gas Field. Z. P. Telegina, M. I. Subbotina, and E. A. Nikitina	26	33
The Specific Activity of DNA from Transformed or Adapted Staphylococcal Cells. P. V. Komarov	31	39
Variability of <i>Aspergillus Niger</i> Under the Influence of Ultraviolet Light. E. Ya. Shcherbakova	34	43
A Study of the Deadaptation of the Yeast <i>Candida tropicalis</i> X-9, Adapted to 1-Arabinose. Yu. M. Karasevich	41	50
Change in Streptomycin Susceptibility of Staphylococci Caused by Ultrasonics and Heat. E. I. Demikhovskii and E. A. Davydov	48	58
A Contribution to Fine Cytology of the L-Form of <i>Proteus vulgaris</i> . I. A. Motrunova	51	61
Cytomorphology of Cells of <i>Escherichia coli</i> B, Treated with Di-(2-Chloroethyl)-Methylamine. Yu. K. Fomichev	57	68
Dynamics of the Degenerative Changes of <i>E. coli</i> as Caused by Subbacteriostatic Doses of Disinfectants. A. M. Malchenkov	65	74
Interrelationships of Corn and Some Bacteria of the Root Microflora. Z. A. Arkad'eva	69	79
Yeasts in the Rhizosphere of Plants. I. P. Bab'eva and N. D. Savel'eva	75	86
Vertical Distribution of Microorganisms in Irrigated Typical Serozems. T. E. Popova	81	94
Determination of Necessary Times of Exposure of Pedoscopes in Soil for Demonstration of the Microbial Community. O. M. Parinkina	84	99
Distribution of Unstable and Stable Forms of Organic Matter in the Water of the World Ocean. A. E. Kriss	89	103
Distribution of Microflora in Recent Deposits of Lake Bol'shoi Sevan. V. L. Mekhtieva	96	113

(continued)

Available From CB

CONTENTS (continued)

	PAGE	RUSS. PAGE
Thermotolerant Bacteria Oxidizing Gaseous and Liquid Hydrocarbons. G. P. Slavina	102	121
Results of an Investigation of the Air of an Oil- and Gas-Bearing Region for the Presence of Hydrocarbon-Oxidizing Bacteria. Z. S. Smirnova	108	128
Effect of Antibiotics on Desulfating Bacteria. N. V. Pomortseva and V. M. Senyukov	112	131
Thermophilic Actinomycetes in Milk and Dairy Products. A. E. Kosmachev	116	136
The Sterilization of Solid Nutritive Media for Growing Molds with Beta Propiolactone. A. A. Yulius and A. G. Bazhakov	122	143
The Eighth International Congress of Microbiology. General Microbiology. A. A. Imshenetskii	126	148
DISCUSSION		
Choice of Microorganisms for Use in the Composition of Bacterial Fertilizers. Yu. M. Voznyakovskaya	140	168
BOOK REVIEWS		
D. M. Gol'dbard, Bacteriophagy. Ya. I. Rautenshtein	145	175
Microbial Classification. Twelfth Symposium of the Society for General Microbiology Held at the Royal Institution. London, April, 1962. M. I. Subbotina	151	180
S. I. Kuznetsov, M. V. Ivanov, and N. N. Lyalikova. An Introduction to Geological Microbiology. Izd. AN SSSR. Moscow, 1962. M. I. Subbotina	156	184
CURRENT EVENTS		
Vladimir Pavlovich Izrailevskii (on his 75th Birthday). Yu. S. Borodulina	159	187
Zinaida Georgievna Razumovskaya (on her 80th Birthday). M. S. Loitsyanskaya	161	188

Available From CB

OPTIKA I SPEKTROSKOPIYA

VOL. XV, NO. 3

CONTENTS

SEPTEMBER 1963

Minimization of the Root-Mean-Square Error for the Approximate Wave Function and Calculation of Matrix Elements	S. I. Vetchinkin	157 (291)
Determination of the Electronic Transition Moments of the Schumann-Runge Bands of the Oxygen Molecule. II	N. I. Krindach, N. N. Sobolev, and L. N. Tunitskii	161 (298)
Average Energy of the Molecules of Rarefied Fluorescent Vapors	V. A. Tolkachev and N. A. Borisovich	165 (306)
Calculation and Interpretation of the Vibrational Spectra of Pyridine and Deuteropyridines. Planar Vibrations	V. I. Berezin	167 (310)
Calculation of Absolute Raman Intensities and Depolarizations of Methane and Its Isotopic Forms in the Gas Phase	N. I. Prokof'eva and L. M. Sverdlov	170 (315)
Rotational Raman Spectra. II. Vinyl Acetylene (C_4H_6)	Z. P. Gribova, V. I. Tyulin, and V. M. Tatevskii	172 (320)
Analysis of the Vibrational Spectra of Polynitroalkanes	E. M. Popov and V. A. Shiyapochnikov	174 (325)
Study of the Vibrational Spectra of Chloroform and Deuteriochloroform in the Liquid and Crystalline States	L. I. Maklakov, V. N. Nikitin, and A. V. Purkina	178 (332)
Use of Layers of Uneven Thickness for Measuring Optical Constants of Liquids in the Region of Strong Absorption	L. I. Al'perovich	181 (338)
The Absorption and Emission Spectroscopy of Pyrene at 20° and 4°K	L. A. Klimova	185 (344)
Fluorescence and Absorption Spectra of Azulene in Frozen Crystalline Solutions	Z. S. Ruzevich	191 (357)
Spectroscopy of Frozen Crystalline Solutions of Diphenylpolyenes and Polyphenyls. II	G. V. Golov	194 (362)
On the Theory of Radiationless Transitions in Doped Molecular Crystals	L. S. Kukushkin	198 (371)
The Effect of Reabsorption in a Plane-Parallel Layer on the Decay of Molecular Luminescence	Yu. V. Kanobeyev	200 (375)
Optical Structure of Luminescence Centers in Ionic Crystals Activated by Mercury-Like Ions	S. G. Zazubovich, N. E. Lushchik, and Ch. B. Lushchik	203 (381)
Mechanism of Luminescence Excitation in Cuprous Oxide in the Impurity Absorption Region	Yu. V. Vorob'ev and Yu. I. Karkhanin	207 (389)
Impurity Distribution and Formation of Color Centers Under the Action of X Rays in $NaCl$ -Mn, $NaCl$ -Cd, and $NaCl$ -Pb	L. V. Grigoruk and I. Ya. Melik-Gaikazyan	210 (394)
The Applicability of the Linear Absorption Method to Inhomogeneous Light Sources	I. S. Fishman and G. G. Il'in	214 (400)
Anomalous Excitation of Metals in Flames and in the Vapors of Certain Organic Compounds	V. F. Zhukovich, A. I. Lyutyi, V. S. Rossikhin, and I. L. Tsikora	217 (405)
Properties of Transmission-Type Quantum Amplifiers	V. V. Lebedeva and I. V. Lebedev	221 (413)
A Study of Some of the Properties of a Fabry-Perot Etalon With a Small Transparent Window	I. M. Nagibina and A. N. Korolev	225 (421)
On the Calculation of the Electro-Optical Parameters of Ethane and Methane	L. M. Sverdlov and N. I. Prokof'eva	227 (424)
DISCUSSIONS		
On the Calculation of the Electro-Optical Parameters of Ethane and Methane. In Connection With the Paper by L. M. Sverdlov and N. I. Prokof'eva	L. A. Gribov	230 (429)
In Connection With the Paper by L. A. Gribov	L. M. Sverdlov and N. I. Prokof'eva	232 (431)

Available From OSA

(continued)

OPTIKA I SPEKTROSKOPIYA, Vol XV, No 3, 1963.

CONTENTS (Cont'd)

SHORT COMMUNICATIONS

The Identity of Methods for the Computation of the Isotopic Shift in Spectral Lines	F. A. Babushkin	232 (432)
A Resonance Optical-Acoustic Chamber	A. A. Sivkov and N. E. Aver'yanov	234 (434)
Investigation of the Output Power of a Neon-Helium Laser as a Function of Various Parameters	N. G. Basov, E. P. Markin, and V. V. Nikitin	235 (436)
Oxadiazole Derivatives as Scintillation Activators in Various Solvents	L. M. Kutsyna, L. A. Ogurtsova, A. P. Grekov, and O. P. Shvaika	236 (438)

Available From OSA

OPTIKA I SPEKTROSKOPIYA

VOL. XV, NO. 4

OCTOBER 1963

CONTENTS

(Numbers in parentheses are original Russian page numbers.
These Russian page numbers are also quoted at the head of each paper.)

The Hyperfine Splitting of the Ground State of Tm ¹⁶⁹	D. L. Kaminekii, K. M. Novik, N. I. Alekseev, and L. S. Varshalovich	239 (441)
The Excitation of Inert Gases in the Positive Column of a Direct Current Discharge at Medium Pressures. III. Upper Levels of Neon and Argon	Yu. M. Kagan, L. A. Lulzova, R. I. Lyagushchenko, and A. D. Khakhnev	241 (445)
Asymmetric Self-Reversible Spectral Line Profile as a Source of Information on Plasma Properties	N. S. Gorbacheva and N. G. Prochazhenskii	244 (453)
Study of the Excited States of Molecules of Vapors on the Basis of the Universal Relation Between Fluorescence and Absorption Spectra. II. Structured Spectra	V. V. Gruzinskii and N. A. Borisevich	246 (457)
Calculation of Integrated Intensities and Depolarizations in the Raman Spectra of Cyclohexane and Deuteriocyclohexane	N. I. Prokof'eva, L. M. Sverdlov, and M. M. Sushchinskii	250 (464)
Investigation of Molecular Interaction in Polymers and Their Hydrogenated Monomers on the Basis of Infrared Spectra. I. Hydrogenated Monomers and Copolymers	G. P. Mikhailov and A. L. Smolyanskii	254 (471)
On the Theory of the Spectral Bands of a Luminescence Center With a Small Radius	O. I. Sild	258 (478)
Study of Evaporated Electroluminescent Films of a ZnS-Cu, Mn Lumilnor	V. L. Bakumenko, G. S. Kozina, and V. N. Favorin	262 (486)
Radioluminescence of Activated Lithium Iodide Single Crystals	G. A. Mikhal'chenko and I. K. Karpov	264 (490)
On the Radioluminescence of Organic Substances. II. Luminescence Duration in Nonluminescent Solvents	S. F. Kilin and I. M. Rozman	266 (494)
Determination of the Optical Constants of Weakly Absorbing Thin Films	A. S. Valeev	269 (500)
Optical Properties of Concentrated Solutions, Melts and Films of Dyes. II	V. M. Rubinov and V. A. Kizel	274 (512)
On the Reproduction of the Optical Properties of an Object by the Wave Field of Its Scattered Radiation	Yu. N. Denisyuk	279 (522)
The Determination of the Spectrum of Particles in a Dispersed System from Data on Its Transparency. I. The Fundamental Equation for the Determination of the Spectrum of the Particles	K. S. Shifrin and A. Ya. Perel'man	285 (533)
Behavior of Gold and Titanium Coated Echolettes in the 23.6-113 Å Region	A. P. Lukitskii, E. P. Savinov, and Yu. F. Shepelev	290 (543)
Experimental Investigation of the Transmission Functions of Air in the Region of the Rotational Absorption Bands of Water Vapor	B. P. Kozyrev and A. V. Mezenov	293 (549)
SHORT COMMUNICATIONS		
On the Theory of the Use of Dependent Generalized Coordinates in the Study of Molecular Vibrations	P. G. Maslov	296 (553)
Samarium-Activated Zinc Sulfide Monocrystals	K. K. Dubenskii, B. I. Maksakov, and T. K. Razumova	298 (555)
Transmission of Long-Wavelength Infrared Radiation (40-200 μ) By Heated Crystalline and Fused Quartz	O. K. Filippov and N. G. Yaroslavskii	299 (558)
On the Franck-Condon Principle for Polyatomic Molecules	B. A. Tavger	301 (561)
Microwave Spectrum of the F ₂ C=CHF Molecule	I. A. Mukhtarov	303 (563)
Infrared Absorption Spectrum of Deuterated Hydrazine Vapors	Yu. I. Kotov, G. S. Koptov, Yu. A. Pentin, and V. M. Tatevskii	303 (564)

(continued)

Available From OSA

OPTIKA I SPEKTROSKOPIYA, Vol XV, No 4, 1963.

CONTENTS (cont'd)

Vibrational Analysis of the Fluorescence Spectra of a Frozen Naphthalene Solution in Pentane and of Naphthalene Vapors	M. A. Kovner and E. P. Krainov	304 (565)
Causes of the Difference Between the Half-Widths of the Absorption and Emission Bands of Crystal Phosphors	N. N. Kristofel, K. K. Rebane, O. I. Slid, and V. V. Khizhnyakov	306 (569)
Absorption and Emission of Divalent Holmium and Erbium Ions in Fluorite-Type Crystals	Yu. E. Kariss and P. P. Feofilov	308 (572)
A Spectroscopic Method for Determining the Density and Thickness of Layers of Strongly Absorbing Substances	N. G. Bakhshiev and N. N. Pribytkova	310 (574)

Available From OSA

SOVIET SOIL SCIENCE

POCHVOVEDENIYE

No. 7, July 1962

Translation printed: November 1963

CONTENTS

	Page	Russian Page
DURATION OF THE RESIDUAL EFFECT OF BASAL FERTILIZATION IN A CROP ROTATION ON SOIL FERTILITY, CHEMICAL COMPOSITION, AND YIELD OF SUGAR BEETS, by S. T. Ligum	677	1
EFFECT OF CONTINUOUS CROPPING ON SOIL FERTILITY, by I. G. Zakharchenko, G. S. Pirozhenko, S. V. Sukhorus	688	10
IRON-HUMUS COMPLEXES AND THEIR ROLE IN PLANT NUTRITION, by K. V. D'YAKOVKA	692	19
LEACHING SOILS SALINIZED WITH SODIUM SULFATE, by S. G. Aristov	699	26
SALT DISCHARGE FROM SOILS AND DETERMINATION OF LEACHING NORMS, P. I. Panin	703	31
CHARACTERISTICS OF THE ORTHOELUVIAL ACCUMULATION AND REDISTRIBUTION OF IRON DURING BROWN EARTH (BUROZEM) FORMATION IN THE AMUR REGION, by B. A. Zimovets	710	39
AEOLIAN SOIL COMPLEX ON WIND-ERODED DARK CHESTNUT SANDY LOAM, by Ye. A. Chakvetadze and T. F. Yakubov	718	46
MINERAL EXCHANGE IN SPRUCE FORESTS OF THE NORTHERN TAIGA AND FOREST TUNDRA IN ARKHANGELSK OBLAST, by A. N. Marchenko and Ye. M. Karlov	722	52
CALCAREOUS SOLONETZES IN THE WESTERN PART OF THE SUB-URAL PLATEAU, by N. I. Kotin	735	67
ORIGIN OF ACID SALINIZED SOILS, by V. M. Fridland and Z. S. Karayeva	743	77
EFFECT OF EXPOSURE AND SOME ELEMENTS OF THE SOIL AND VEGETATION ON THE TEMPERATURE REGIME OF THE SOIL AT THE NORTHERN BOUNDARY OF THE TAIGA, by A. P. Tyrtikov	747	82
AGRICULTURAL USE OF TROPICAL SOILS IN AFRICA, by I. A. Denisov	750	87
METHODS		
CARBON-NITROGEN RATIO OF THE PRINCIPAL SOILS OF CISCAUCASIA, by A. M. Durasov	757	98
TRILONOMETRIC DETERMINATION OF AVAILABLE MAGNESIUM IN SOILS DEFICIENT IN ADSORBED BASES, by M. M. Mazayeva and O. V. Neugodova	759	100
COLORIMETRIC DETERMINATION OF SILICIC ACID IN TAMM'S OXALATE EXTRACTS, by N. I. Belyayeva	763	104
A METHOD OF DETERMINING AVAILABLE PHOSPHORUS IN CALCAREOUS LIGHT-CHESTNUT SOILS IN VOLGOGRAD OBLAST, by N. I. Zhmakina ..	767	107
(continued)		

Available From Scripta Technica

POCHVOVEDENIYE, No 7, 1962.

CONTENTS (Contd)

	Page	Russian Page
MECHANIZED AUGER FOR TAKING UNDISTURBED SOIL SAMPLES, by Yu. N. Starodumov	770	110
SAMPLING SOILS IN STUDYING THE DYNAMIC OF NUTRIENTS, by N. M. Mayburoda	773	112
REVIEW		
VALUABLE RESEARCH ON URGENT PROBLEMS IN SOIL SCIENCE AND PROTECTIVE AFFORESTATION, by I. S. Matyuk	775	114
WATER SOLUBLE PRODUCTS OF THE LITTER FROM CERTAIN TREES AND THEIR SIGNIFICANCE IN SOIL FORMATION (A Review of K. Bloomfield's Work at Rothamstead Experimental Station)	777	116
BIBLIOGRAPHY	779	118

Available From Scripta Technica

SOVIET SOIL SCIENCE

POCHVOVEDENIYE

No. 8, August 1962

Translation printed: December 1963

CONTENTS

	Page	Russian Page
RESULTS OF A STUDY OF THE NITROGEN BALANCE IN SOD-PODZOLIC SOILS USED IN AGRICULTURE, by I. V. Tyurin, V. K. Mikhnovskiy, and A. K. Yartseva	789	1
COMPARATIVE STUDY OF THE COMPOSITION OF SOIL SOLUTIONS AND LYSIMETRIC WATER FROM SOD-PODZOLIC SOILS, by Ye. I. Shilova and L. V. Korovkina	796	11
ANCIENT IRRIGATED SOILS IN THE MURGHAB OASIS, by N. G. Minashina	806	24
GENESIS OF SOME MEADOW SOILS IN THE MARITIME TERRITORY, by Yu. A. Livorovskiy and V. I. Roslikova	814	38
SOME ZONAL AND PROVINCIAL CHARACTERISTICS OF THE THERMAL REGIME OF THE SOIL-AIR SYSTEM, by Yu. P. Veredchenko	824	50
SOILS OF THE OAK FOREST IN THE FLOOD PLAIN OF THE VOLGA-AKHTUBA VALLEY, by O. D. Rode	831	59
SOILS OF THE NORTH MONGOLIAN RIVER VALLEYS WITH SPECIAL REFERENCE TO THE BORO-GOL RIVER VALLEY, by E. P. Gusenkov and E. I. Pankova	835	64
SOME DATA ON U. S. SOILS BETWEEN MADISON (WISCONSIN) AND SAN FRANCISCO, by Ye. V. Lobova	842	73
TOXICITY OF SOME MOSES AND LICHENS TO AZOTOBACTER IN KARELIAN SOILS, by T. I. Yevdokimova	852	88
AIR PERMEABILITY OF SOD-PODZOLIC SOIL ON DIFFERENT KINDS OF LAND USE WITH VARYING MOISTURE CONTENT, by I. N. Nikolayeva	856	92
SOIL MOISTURE METER (TENSIMETER) AND ITS USE IN THE STUDY OF THE BEHAVIOR OF SOIL MOISTURE, by K. N. Shishkov	863	100
REVIEW		
ATLAS OF THE MAIN SOIL GROUPS OF THE CZECHOSLOVAKIAN SOCIALIST REPUBLIC. Prague, 1961, Prof. Dr. Joseph Pelishek	869	106
CHRONICLE		
RESOLUTION OF THE ENLARGED PLENUM OF THE PERMANENT INTER-DEPARTMENTAL SCIENTIFIC METHODS COMMISSION TO CONTROL SOIL EROSION, Dokuchayev Soil Institute of USSR Ministry of Agriculture, held in Moscow, March 27-29, 1962	872	108
BIBLIOGRAPHY	880	117

Available From Scripta Technica

Instruments and Experimental Techniques

A translation of Pribory i Tekhnika Eksperimenta, a publication of the Academy of Sciences of the USSR

(Russian Original Dated May-June, 1963)

1963, No. 3, pp. 371-588

November, 1963

CONTENTS

	PAGE	RUSS. PAGE
Photomultipliers in Automatic Control Schemes of Amplification (Review). <u>L. V. Klenformalit</u>	371	5
Magnetic Quadrupole Lenses for Linear Accelerators with Drift Tubes. I. Requirements for the Lenses and Determination of the Shape of the Pole End-Pieces. <u>I. M. Kapchinskii and V. K. Plotnikov</u>	381	15
Magnetic Quadrupole Lenses for Linear Accelerators with Drift Tubes. II. Measurement ¹ of Field Nonlinearities in Lenses with Flat Poles. <u>E. N. Danil'yan and V. K. Plotnikov</u>	387	20
A Study on a Model of a Recharging Electrostatic Generator. <u>Yu. M. Khimyi and L. N. Kochemarova</u>	393	25
5-MeV Linear Electron Accelerator (Model U-12). <u>C. A. Val'dner, A. A. Glazkov, and A. I. Finogenov</u>	397	26
Reading Channel of the Device for Measuring Coordinates on Photographs of Tracks. <u>L. I. Lichtenbaum, B. N. Moiseev, and V. S. Kaftanov</u>	399	32
Follow-Up Drive of the Device for Measuring Coordinates on Photographs of Tracks. <u>B. I. Moiseev, V. I. Lyulevich, and O. P. Fedotov</u>	407	40
Counter with Selective Efficiency for the Recording of Gamma-Rays Which are Emitted Without Recoil. <u>K. P. Mitrofanov, N. V. Il'iarionova, and V. S. Shpindel'</u>	415	49
Application of Cerenkov Threshold Counters for the Separation of π - and μ -Mesons in Meson Beams. <u>V. D. Bobrov, V. G. Varlamov, Yu. M. Grashin, B. A. Dolgochev, V. G. Kirillov-Ugryumov, V. S. Roganov, and A. V. Samoilov</u>	421	55
Multidwire Neutron Detector with An Overload-Free Preamplifier. <u>S. S. Moekalov, Yu. V. Adamchuk, and S. K. Botnikov</u>	426	58
On The Track Width in Convection Chambers. <u>N. G. Volkov, V. K. Lyapidevskii and I. M. Obodovskii</u>	428	61
Measurement of the Growth Rate of Bubbles in a Propane Chamber. <u>Yu. A. Aleksandrov, G. S. Votovov, and N. B. Delone</u>	430	62
Measurement of the Boundaries of the Radiation Sensitivity Zone for Propane. <u>Yu. A. Aleksandrov and N. B. Delone</u>	433	64
Automatic Device for Measuring the Radioactivity of Wire. <u>M. P. Sokolov</u>	435	66
A Multidimensional Data Analyzer. <u>A. B. Ekatov, L. A. Matalin, V. F. Semenkov, V. I. Smirnov, S. B. Chubarov, and A. M. Shimanskii</u>	442	72
An Electronic Pulse-Form Discriminator. <u>A. A. Sanin and Yu. V. Mineev</u>	449	79
A Stable One-Tube Integrator for Nuclear Radiation Monitors. <u>O. B. Dem'yanovskii, E. M. Leikin, and K. I. Yablonin</u>	452	82
A Method of Measuring Impulse Voltages. <u>G. A. Ostrovskov and A. A. Shtenberg</u>	455	85

(continued)

Available From ISA

CONTENTS (continued).

	RUSS. PAGE	PAGE
A Direct Current Measuring Amplifier. <u>V. S. Verkhovtsev, V. Yu. Vorobkevich, M. A. Rakov, and L. A. Sinitikii</u>	460	89
On the Measurement of the Input Resistance of Pulse-Operated Tubes. <u>O. S. Kolomy</u>	463	93
A Generator of Long Time Intervals and a Precision Timer. <u>G. N. Mukheliashvili and Z. I. Bakhtadze</u>	467	97
A Pulse Generator for Spin Echo Observation. <u>O. F. Bezrukov and Yu. I. Nerovnov</u>	470	100
A 10^{-14} A Current Integrator Using the 8-90 Electrostatic Voltmeter. <u>V. V. Yakushin, T. A. Subbotina-Mel'nik</u>	474	104
Measuring Microwave Power with an Electron Beam Probe. <u>B. G. Bremnn and S. B. Mochenay</u>	477	108
Energy Measuring Instrument for a High Power Electrical Discharge. <u>V. V. Pedanov and G. A. Sinei'nikov-Murylev</u>	479	108
Analytical Mass Spectrometer Using a Modulated Molecular Beam. <u>G. D. Tanasyev, G. V. Katpov, and V. L. Tal'roze</u>	484	113
Measurement of the Mass Spectrum of Residual Gases by Means of Mass Spectrometer with High Resolving Power and Sensitivity. <u>B. A. Mamyrin and B. N. Shustrov</u>	489	118
Laboratory Ultrahigh-Vacuum Apparatus with Filamentary Solid-Phase Titanium Evaporators. <u>A. A. Kuz'min</u>	493	122
Fast Vacuum Slide Gate. <u>O. V. Lavrov, N. D. Fedorov, and N. N. Khaldin</u>	502	126
Katharometer Leak Detector. <u>B. I. Aptek</u>	505	131
Synchronizing and Speed Control Systems for Raster Motion Picture Cameras Using A Mirror Scanner. <u>A. M. Andreev, A. A. Bokotov, and A. A. Lukashov</u>	509	136
Arrangement for Studying the Kinetics of Photoconductivity by the Supplementary Rectangular Pulse Method. <u>E. A. Sal'kov</u>	512	140
Obtaining Steady Magnetic Fields of a Prescribed Shape. <u>A. A. Azaryan, G. V. Badalyan, and G. N. Britsyan</u>	514	142
Generation of Pulsed Magnetic Fields of Long Duration. <u>V. B. Rode, A. V. Vedyayev, B. N. Krasinov, and V. M. Talyzin</u>	519	146
The KGU-MP230 Laboratory DC Magnet. <u>A. L. Bil'dyukovich</u>	521	148
A Differential Method for the Study of Relaxation Processes. <u>L. G. Parshikii</u>	523	150
Measurement of the Secondary Emission Coefficient of Dielectrics. <u>V. S. Gorovyan</u>	526	153
Small-Angle Chamber with a Proportional X-ray Radiation Counter. <u>D. A. Gogonov, E. A. Porai-Koshits, and Yu. G. Sokolov</u>	528	155
Laboratory Device for Compressing Liquids to 20 atm. <u>L. D. Livshits and B. D. Martynov</u>	534	161
Hydrogen Liquefiers with Efficient Heat Exchangers. <u>E. S. Borovik, I. F. Mikhailov, and N. A. Kedik</u>	538	165
Device for Studying Creep in Metals at Low Temperatures. <u>I. A. Gindin, S. F. Kraychenko, Ya. D. Starodubcov, and V. M. Godzhay</u>	542	169
Device for Studying the Damping of Low Frequency Torsional Oscillations. <u>R. I. Garber, I. A. Gindin, V. M. Stolyarov, G. G. Chechel'nikii, and L. A. Chirkina</u>	545	172
Efficiency of Plastic Scintillators Based on Copolymers of Styrene with Paravinyltoluene. <u>A. P. Kilimov and N. M. Grachev</u>	548	175
Pulse Electron Gun for Controlling Beams with High Current Density. <u>S. N. Trenova</u>	550	177
Motor Driven Voltage Regulator for Autotransformers. <u>G. B. Platenashvili and S. A. Gink</u>	552	179
Adjustable Dummy Load. <u>V. I. Vishnevskii and Yu. A. Grits</u>	553	180
Automatic Sweep for the Magnetic Field of a Type MI-1305 Mass Spectrometer. <u>V. I. Zubkov and A. M. Ivanov</u>	555	182
A Helically-Wound Cavity for EPR Spectrometers with High-Frequency Magnetic-Field Modulation. <u>Yu. B. Pol'skii</u>	558	184
Using a Photoelectrooptical Amplifier for Ballistic Measurements. <u>F. A. Charnaya</u>	560	186

(continued)

Available From ISA

CONTENTS (continued)

	RUSS. PAGE	PAGE
Measuring the Transmission Time through a Photoelectron Multiplier. <u>A. Yu. Borisov</u>	561	187
Calorimeter for Measuring the Radiation Energy of Optical Quantum Generators. V. S. Zuev and P. G. Kryukov	563	188
Adapter to the FRS Device for Investigating the Luminescence of Cathodoluminophors. <u>Yu. V. Voronov and A. G. Ovchinnikov</u>	565	190
A Simplified Photoelectric Fluorometer. <u>V. N. Smorchkov and A. N. Nikitina</u>	567	192
Photoelectronic Device for Measuring the Thickness of Thin Films. <u>V. D. Perevertayev</u> , V. M. Kupriyanov, and M. S. Metlik	568	193
Device for Imparting Vibrations to Crystals Pulled from the Melt. <u>G. V. Nikitina</u> , A. I. Podya, and V. N. Romanenko	571	196
Crystal Holder for Investigations Under High Pressures. <u>G. G. Leonidova</u>	573	198
A Simple Adsorption Gas Analyzer. <u>V. B. Kellin</u>	574	199
Evaporation of Liquid Hydrogen Stored in SD-10G Vessels. <u>I. Yu. Shebalin</u>	576	201
A Capacitor Liquid Helium Level Indicator Using a Transistor. <u>Ya. I. Rosenberg</u> and V. G. Kozulin	578	203
Resistance of Carbon Thermometers as a Function of Temperature. <u>I. N. Kalinkina</u>	580	204
A Device for Local Cooling. <u>A. I. Shal'nikov</u>	582	205
NEW INSTRUMENTS		
Apparatus for Measuring Pressure Pulses	584	207
Device for Measuring the Thermoelectric Parameters of Semiconductor Materials	585	208

Available From ISA

SOVIET RADIOCHEMISTRY

*A translation of RADIOKHIMIYA
a publication of the Academy of Sciences of the USSR*

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Volume 4, Number 2

March-April, 1962

CONTENTS

	P A G E
	ENG. RUSS.
Iosif Evseevich Stark	116 129
Viktor Ivanovich Spitsyn	117 131
Theoretical Derivation of a Formula Relating the Crystallization Coefficient D and Distribution Constant K to the Recrystallization Time - Yu. S. Vernov and V. R. Klickman	118 133
Mechanism of Zirconium Extraction by Organophosphorus Compounds. I - G. P. Nikitina and M. F. Pushlenkov	123 137
Effect of Structural Factors on the Thermodynamic Characteristics of the Extraction of Salts of Basic Dyes - K. S. Krasnov, K. B. Yatsiminski, and P. D. Kashirina	133 148
Carbonate Compounds of Plutonyl - A. D. Gel'man, A. I. Moskvin, and V. P. Zaitseva	138 154
Determination of the Composition and Instability Constants of Citrate and Tartrate Complexes of Americium (III) by the Ion-Exchange Method - A. I. Moskvin, G. V. Khalurin, and A. D. Gel'man	145 162
Investigation of Complex Compounds of Neodymium and Ytterbium with Gluconic Acid by the Ion Exchange Method - N. A. Kostromina	149 167
Effect of the Amount of Absorbed Ions in a Chromatography Column on the Position of a Peak on the Elution Curve - L. Geinar and E. Geinar	157 175
Chromatography Separation on Microgram Amounts of Neptunium and Plutonium on the Cationites KU-1 and KU-2 - V. D. Zagrai and L. I. Sel'chenkov	161 181
Tracer Study of the Possibility of Extraction Separation of Thorium from Some Elements. II. Behavior of Rare Earth Elements During Extraction of Thorium Phenylacetate. Isolation of Thorium from Complex Mixtures - - L. A. Tserkovnitskaya and A. K. Charykov	165 184
Organic Co precipitants XVI. Concentration and Photometric Determination of Thorium in Natural Waters - V. L. Kuznetsov, T. G. Akimova, and O. P. Eliseeva	168 188
The Effect of Anions on the Extraction of Radioactive Elements from Minerals - L. E. Stark and K. F. Lazarev	173 193

(continued)

Available From CR

CONTENTS (continued)

RADIOKIIIMIYA, Vol IV, No 2, 1962.

RUSS.
PAGE PAGE

Ionites Based on Zirconium II. The Use of Zirconyl Oxalate for Determining Sr^{89} Through Its Daughter Y^{89} in Samples of Sea Water — Yu. D. Sinochkin, D. A. Perumov, S. A. Patin, and E. G. Azhazha		177	198
Diffusion of Strontium-90 in Soil and Sand — V. M. Prokhorov		183	205
Reactivity Measurements and Information — V. V. Artem'ev		189	211
Intramolecular Distribution of Tritium in Labeled Unsaturated Organic Compounds Obtained by "Hot" Synthesis. Cyclohexene and Cyclohexadiene-1,3 — V. V. Pozdeev, Ya. Klas, An. N. Nemeyanov, and B. G. Dzantiev		192	215
Treatment of Liquid Laboratory Wastes Containing Certain Radioactive Isotopes — V. V. Volkhin, A. K. Shtol'skii, and E. M. Dosik		196	220
BRIEF COMMUNICATIONS			
Sorption of Long-Lived Fission Products by Soils and Argillaceous Minerals II. Sorption of Ce^{144} by Soils — Yu. A. Kokotov, R. F. Popova, Liu Tsing-Chih and Mao Shih-tsai		202	227
Effect of Some Complex-Forming Compounds on the Distribution of Microamounts of Strontium Ions between an Active Manganese Dioxide Precipitate and a Solution — Yu. V. Egorov and E. L. Krylov		204	229
Isolation of Np^{4+}, Pu^{4+}, and Am^{3+} from Solutions by the Sulfate Method — V. I. Grebenchikova and N. B. Chernyavskaya		207	232
Exchange of Uranium between Oxalate Complexes of Uranium (IV) and Uranyl — A. A. Grinberg and D. N. Bykovskii		210	234
State of Carrier-Free Radioactive Bismuth in n-Butanol — B. Z. Iofa and V. N. Vysotskii .		213	235
Chromatographic Separation of Neptunium from Uranium, Plutonium, and Plasmon Products — Yu. A. Zolotov and D. Nishanov		217	241
Absolute Measurements of Weak Neutron Fluxes — G. V. Gorshkov, A. N. Silant'ev and O. S. Tsvetkov		220	244

Available From CB

TEORIYA VEROYATNOSTEI I EEE PRIMENENIYA
Vol VIII, No 1, 1963.

CONTENTS

Principle of averaging for parabolic and elliptic differential equations and for Markov processes with small diffusion	R. Z. KHAS'MINSKII	1
On optimum methods in quickest detection problems	A. N. SHIRYAEV	22
Asymptotic optimality of group and systematic codes for some channels		
	R. L. DOBRUSHIN	47

SHORT COMMUNICATIONS

A limit theorem for homogeneous Markov chains	A. V. SKOROKHOD	61
The law of large numbers for $D[0,1]$ -valued random variables..	R. RANGA RAO	70
Diffusion processes with reflection and problems with a directional derivative on a manifold with a boundary	M. I. FREIDLIN	75
A central limit theorem for a class of dependent random variables	I. A. IBRAGIMOV	83
Continuous planning of regression experiments, I	S. N. SOKOLOV	89
Statistical investigation of Russian dolnik trimeter.....	M. L. GASPAROV	96
Analytic properties of a generating function for the number of renewals		
	Yu. K. BELYAEV and V. M. MAKSYMOV	103
Report on the All-Union Colloquium on Limit Theorems of Probability Theory		105

Available From SIAM

On High-Speed Flotation and Improving the Operation of Flotation Machines.....	1 (1)
Some Generalizations of Discussions in Connection with the Imminent Conference to be Held at VLNKH Covering Experience Gained in Intensifying the Operation as Well as Modernizing and Improving the Design of Flotation Machines, by S. I. Mitrofanov.....	2 (2)
High-Speed Flotation - A Method of Using Reserves to Increase the Extraction and to Lower the Cost of Non-Ferrous Metals, by O. A. Shumkov and G. N. Kurbet'ov.....	6 (5)
Comparative Tests on the Mekhanostr-6A and Sikkali Flotation Machines at the Dzhezkazgan Concentrating Plant, by L.A. Larionov and L. Ya. Shestakov.....	12 (11)
Testing the High-Speed Flotation Method at the Zolotushinskoi Concentrating Plant, by N. N. Kalmykov.....	15 (13)
Results of Industrial Tests Made on Deep Air-Lift Flotation Machines, by B. Sh. Arutyunyan and N. F. Meshcheryukov.....	19 (17)
Industrial Use of Oxygen-Enriched Air to Roast Sulfide Zinc Concentrate in Fluosolid Furnaces at the Ust'-Kamenogorsk Lead-Zinc Combined (Named for V. I. Lenin), by A. M. Vartanyan, V. D. Ponomarev and T. Kh. Tserekov.....	23 (21)
On the Deoxidation of Blister Copper, by G. A. Teterin, M. I. Kochnev and A. F. Plotnikova.....	29 (27)
Intensifying the Leaching of Copper-Sulfide Minerals with Thionine Bacteria, by V. I. Ivanov and F. I. Nagirnyak.....	33 (30)
Current Leakage when Electrolytically Refining Copper and Method of Calculating this Leakage, by N. N. Shvetsov.....	39 (36)
Autoclave Reduction of Cobaltous and Nickelous Hydroxides with Hydrogen by G. N. Dobrokhotov, N. I. Onuchkina and Z. L. Ratner.....	47 (44)
Roasting Ores from the Khovu-Aksy Deposit, by M. A. Gavrilov.....	50 (47)
Combining the Chlorine from Magnesium Production Gases in the Combustion Burner of Hydrogen-Bearing Fuel, by I. L. Reznikov, Yu. A. Pol'yakov, Yu. V. Solov'yev and V. N. Perevozov.....	52 (49)
Formation of Hydrogarnets in Alumina Industry Slimes, by O. I. Arakelian, A. A. Chistyakov, Yu. I. Pavlov and L. M. Podzorova.....	56 (54)
Sealing Graphite with Carbon, by A. E. Chalykh.....	60 (58)
The Asymmetrical Deformation Factor in Extrusion, by V. V. Zhlobov.....	63 (62)
Some Aspects of Forming Magnesium Alloys, by A. I. Kolpashnikov.....	69 (68)
Producing Electrolytic Tantalum and Niobium, and their Alloys, by V. I. Konstantinov and V. M. Amesov.....	73 (72)
Vsevolod Aleksandrovich Naumov (1905-1962).....	78 (77)
Testing and Automatic Photometric Unit for Continuous Measurement of Residual Concentrations of Xanthogenate Ions in Flotation Pulp, by G. A. Khan, M. Gurin, V. I. Baulov and V. V. Smirnov.....	79 (79)
An Optimum Technology for Hot Working Brass LS59-1, by A. A. Presnyakov, V. V. Chervyakova, A. V. Novikov and L. P. Fridman.....	82 (82)
Influence of Binder Preparation on Anodic Mass Quality, by M. A. Kuvakin	84 (84)
A Conference of Tsvetnye Metally Readers at Gintsvetmet.....	86 (85)
The Second Plenum of the Central Board NTO Non-Ferrous Metallurgy.....	87 (86)
A Conference on Using Kaolins from the Angren Site.....	88 (87)
Letters to the Editor.....	90 (88)
Electrolytic Refinement of Converter Matte at the Thompson Plant.....	92 (90)
Processing Chloride Copper Ores in Mantos Blancos.....	92 (91)
New Technical Literature.....	96 (93)

Available From PS

VESTNIK AKADEMII MEDITSINSKIKH NAUK SSSR

(Herald of the Academy of Medical Sciences USSR)

Vol XVIII, No 11, 1963

[Following is a complete translation of the Russian-language medical journal Vestnik Akademii Meditsinskikh Nauk SSSR (Herald of the Academy of Medical Sciences USSR), Vol XVIII, No 11, Moscow, 1963, pp. 3-87.]

Table of Contents

V. I. Ioffe. Immunopathology, a Problem of Experimental and Clinical Medicine	1
A. I. Strukov. General Morphology of Immunological Processes Experimentally and from the Clinical Aspect	12
V. M. Ivanov. The Effect of Adrenalectomy and Injection of Certain Corticosteroids on Antibody Formation	21
A. A. Podkolzin. The Effect of Immune Complexes on the Superior Cervical Sympathetic Ganglion.	31
V. I. Ioffe, A. I. Strukov, V. V. Serov, and L. M. Khay. Experience in the Experimental Reproduction of Systemic Connective-Tissue Lesions	39
A. M. Monayenkov. Dynamics of Autoimmunological Reactions in the Development of Experimental Cardiac Lesions.	57
V. B. Zolotarevskiy. Autoimmune Processes in Goiter Tissue in Thyrotoxicosis	65
A. M. Raskin. The Immunology of Hashimoto's Disease	73
V. V. Serov and L. M. Khay. Some Problems of the Immunology and Immunomorphology of Mazugi Nephritis.	79
L. I. Ravkina. Experimental Allergic Encephalomyelitis. Morphology of Central Nervous and Thymico-Lymphatic Systems	93

(continued)

Available From JPRS 22711

CONTENTS (Contd)

Yu. P. Gofman and S. M. Klimenko. The Use of Ferro-globulins in Electron-Optical Immunomorphology.	103
Congressses, Meetings and Conferences	
B. N. Sofronov. Conference on Problems of Immunopathology. . .	113
A. I. Danilov. Results of Scientific Research in the Field of Microbiology, Epidemiology and Hygiene for 1962 . . .	128
T. A. Uspenskaya. Scientific Conference on the Results of the Experimental Study and Prospects of Clinical Application of a New Antibacterial Antibiotic, Ristomycin	137
A. I. Danilov . Ornithosis as a Problem.	141
Book Review	
O. V. Vasilevskaya. A Review on the Book by S. N. Cherkinskiy and N. N. Trakhtman. <u>Obezzerazhivaniye Pit'yevoy Vedy</u> (Disinfection of Drinking Water).	145
Current Events	
The Creator of the First Blood Transfusion Institute in the World	151

Available From JPLS 22711

VESTNIK SVYAZI, No 10, 1963.

HERALD OF COMMUNICATIONS

A Monthly Industrial-Technical Journal of
the USSR Ministry of Communications and
of the Central Committee of the Trade
Union of Communication Workers and of the
Motor Transport and Highways Workers

No 10 (283) October 1963
(Twenty Third Year of Publication)

CONTENTS

Page

V. G. Igoshina
Ideological Education of Supervisory Personnel. 8

COMMUNICATION ENGINEERING

A. S. PUSTOVYTOVSKIY -- 1-Kw Television Transmitter Based on the Relay Station of the Type TRSA-56.	16
K. A. BRUSILOVSKIY -- New Electronic Instruments for the Measurement and Analysis of Telegraph Distortions.	26
M. S. GUREVICH -- Recommendations of the International Advisory Committee (MKKR) in Regard to Radio-Signal Spectra.	39

ORGANIZATION AND OPERATION OF COMMUNICATION FACILITIES

By Putting Into Use Advanced Experience We Will Improve the Quality of Postal-Service Work.	51
Ye. Ya. GERCHIKOV -- Rebuilding of Long Distance Telephone-and-Telegraph Communication Facilities in the Consolidated Economic Regions.	67
K. A. DAYLYUDWNKO -- Experience in the Operation of an Automatic Code-Route-Switching Telegraph Center ("Liman").	73
M. B. SPEKTOR -- Employment of Underground Drifts "Kret".	81
D. A. ISHIN and Yu. A. TOPOROV -- The Conference Held Regularly by the Chief of an Oblast Communications Administration.	86

Available From IPRS 22689

(continued)

CONTENTS (Contd)

	Page
B. S. DISSKIY -- So That The Blue Screens Would Shine Better.	93
G. I. ARDATOV -- Organization of Printed-Matter and Mail Delivery in Kuybyshev.	97
A. Ye. DUBINSKIY -- Collective of Orsha OPP /Mail Transport Department is Striving for Communist Labor.	103

COMMUNICATION ECONOMICS

G. E. GOLOMB -- The Fund of the Enterprise is an Important Factor in Strengthening the Self-Supporting System.	107
We Are Discussing The Article By M. A. Shvechikov "The Planning and Economic Work Should Be Improved".	114

ADVICE

K. D. LUNIN -- Advice on Matters of Wages and Bonus Payments to Communication Workers.	123
--	-----

REVIEWS AND BIBLIOGRAPHY

Yu. D. FARBER -- A Successful Book.	140
-------------------------------------	-----

Available From JPRS 22699

VESTNIK SVYAZI

HERALD OF COMMUNICATIONS

A Monthly Industrial-Technical Journal of
the USSR Ministry of Communications and
of the Central Committee of the Trade
Union of Communication Workers and of the
Motor Transport and Highways Workers

No 11 (284)

November 1963

(Twenty Third Year of Publication)

Contents

Page

EDITORIAL -- Unremitting Attention to the Adoption of New Equipment.....	8
Work of Trade-Union Organizations Must be Raised to the Level of the Tasks of Communist Construction.....	16

COMMUNICATION ENGINEERING

B. A. PIONTKOVSKIY -- Electric Power-Supply System for the Crossbar Systems of Rural Telephone Service.....	33
A. D. DEOLENTSKAYA -- The Raising of Stability of Simplex Telegraph Links.....	42
A. A. BABENKO -- A Two-Channel Set of Equip- ment for Simultaneous Translation of Speeches.....	53
F. V. MALIY -- Calibration of a Frequency- Deviation Meter by Means of a Heterodyne Wavemeter..	60
V. A. LOLANOVICH -- An Instrument for Test- ing Semiconductor Devices.....	66

ORGANIZATION AND OPERATION
of
COMMUNICATION FACILITIES

Ya. Ya. PABERZ -- The System of Direct Con- nections at Riga Telegraph Office.....	77
I. V. BULYGIN -- Organization of Communication Service in the Consolidated Rayons of Kievskaya Oblast.....	87
I. G. PAPINAKO -- For Complete Safety of Postal Valuables.....	92
N. I. ZEMEROV -- Good Communication Service for South Ural'skiy Sovnarkhoz.....	99

(continued)

Available From JPRS 22911

VESTNIK SVYAZI, No 11, 1963.

CONTENTS (Contd)

PUBLIC SUPERVISION IN OPERATION

Page

N. M. LYUBAVIN -- Assistance Groups for Party Supervision are Sharing Experience.....	101
A. I. KOKHANSKIY -- Under the Beam of the "Searchlight".....	105

COMMUNICATION ECONOMICS

P. I. DYATLOV -- We Are Discussing the Plans for 1964-1965.....	106
N. M. GUBIN and V. A. BARSUK -- The Application of Linear-Programming Methods in the Planning of City Telephone Exchanges.....	111

AT COMMUNIST-LABOR ENTERPRISES

A. L. GUZOVSKIY -- The Quality of Work is at the Center of Attention.....	122
---	-----

Available From JPRS 22911

VOYENNYY VESTNIK, No 9, 1963.

TABLE OF CONTENTS

	<u>Page</u>
I. LEAD ARTICLES	1
A. The Main Striking Power of the Ground Forces, Unsigned	1
B. Heroism of One Bubble by Col V. Bulikov	3
C. A Hold Towards the Gulf by Col I. Kravchenko	10
II. TACTICS	14
A. A High Level of Smooth Functioning and Operational Efficiency for Staffs by Col Gen S. Shtemenko	14
B. Peculiarities of the Attack of a Company in the Mountains by Col P. Belous	20
C. Paratroopers Master Skills by Col F. Gavrikov	23
D. Aviation Support of Troops by Col V. Pavlikov	27
E. Artillery Battalion Desert Operations by Colonels N. Korf and I. Gapon	31
F. Engineer Tasks in Wooded Swampy Terrain by Col F. Myshak and Lt Col Ye. Korotkevich	36
G. Forests and Swamps Are Not Obstacles to Signalmen by Lt Col P. Karplyuk	40
	(continued)

Available From ACSI I-1614-I
ID 2201421

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>
II. "Tactics of Small Units in Modern Combat" (A discussion of the article published in No. 2)	42
With What We Disagree by Col M. Deshko	42
When to Adopt a Decision for a Meeting Engagement by Lt Colonels V. Vinnikov and N. Ryabov	45
I. Answers to Problems: A Battalion Operates on Contaminated Terrain	46
III. TRAINING AND INDOCTRINATION	48
A. In and Through the Collective by Col Gen P. Lashchenko	48
B. In Close Contact with Life and Tasks by I. Makovenko, Major General of Aviation	53
C. Guard Socialist Property by Maj Gen of the Legal Service, A. Tsumarev, Lt Col of the Legal Service, A. Mander, Candidate of Legal Science	56
D. From the Experience of Working Through a Field Exercise by Maj M. Kolesnichenko	62
E. The Individual Rating (Discussion of the article published in No. 4)	66
F. Retired Officers Among the Soldiers by Col D. Mospanov, Retired	69
G. About the Field Training of Cadets by Maj Gen R. Malinovskiy	70
H. Our Teaching Mechanisms by Col V. Lystsov and Col A. Logvinenko	74
I. A Visit with the Cadets at the Saratov Military College by Lt Col V. Nesterov	82
J. Tenth Anniversary of the <u>Armeyskiy Prodvod Magazine</u> by Col A. Yankovlev, Rec.	86
IV. ROCKETS, ARTILLERY, AND AIR DEFENSE TROOPS	89
A. Rockets and Artillery	89
1. Field Firing by Col B. Kuz'min	89
2. Special Processing in the Battery by Major M. Utkin	92
3. Work on the Fire Control Instrument When Firing at Moving Targets by Lt Col L. P. Reznik	94
4. Simplified Calculation of the Average Reading and True Azimuth by Lt Col S. Smetankin	95
5. Reduce the Time for Adjustment (A discussion of the article published in No. 6)	98

(continued)

Available From ACSI I-1614-I
ID 2201421

TABLE OF CONTENTS (Cont'd)		<u>Page</u>
6. Consultation on Firing (Answers to questions of officers)		102
B. Air Defense Troops		106
1. On a Multiple Subject -- An Exercise with a Battery by Col N. Vorob'yev		106
2. Autopilot for Antiaircraft Rockets by Col M. Artamonov		112
V. SPECIAL TROOPS		118
A. Engineer Troops		118
1. Engineer Support to a River Crossing in Force at Night by Lt Col V. Shamshurov		118
2. Crossing Marshy Areas by Lt Col Yu. Yezerskiy		123
3. Duty of the Engineer-Diver by Col A. Belokoni		126
4. Soviet Sappers in Algeria by Ya. Davydov and V. Lenin		129
B. Special Troops		131
1. Communications must be Maintained Around the Clock by Col N. Leonovich and Col M. Platnev		131
2. Signal Communications in Mountains by Major V. Vinogradov		133
VI. FIRE AND WEAPONS		135
A. From a Tank by Referring to a Burst by Col Yu. Semenov and Col N. Romanov		135
B. Firing in a Populated Place by Lt Col N. Zataarinnyy		142
C. Teaching Firing at a Great Distance by Col V. Ivanisenko and Lt Col N. Osinov		145
D. Work Gives Birth to Skill by Guards Major N. Natal'yin and Guards Captain Yu. Pavlov		149
E. Effect of a Lateral Wind on the Flight of a Rocket , Unsigned		153
F. Physical Principles of Construction of a Nuclear Weapon by Prof. F. Rybkin		155
VII. BOOK REVIEW		162
Individual Approach by Guards Lt Col M. Mezenev		162

TABLE OF CONTENTS

	<u>Page</u>
I. LEAD ARTICLES	1
A. The Bright Road of October, unsigned	1
B. Be on the Alert -- That Is Our Sacred Precept, unsigned . .	6
C. Garrison and Guard Duty Regulations, unsigned	11
II. HONORING THE TWENTIETH ANNIVERSARY OF THE BATTLE FOR THE DNEIPEL	15
A. The Battle for the Dnieper by Col Gen A. Radmilyevskiy . . .	15
B. The Forcing Operation From Movement by Col Gen A. Tsirulin .	20
C. Guardsmen -- Forward! by Col S. F. Shutov	26
III. ADVANCED TANK TRAINING COMPANY	41
A. Reward New Boundaries by Guards Lt Gen of Tank Forces M. Vaynrub, Hero of the Soviet Union	41
B. Guarantee of Success by Guards Captain V. Borzhko	42
C. A High Firing Skill for Gunners by Guards Sr Lt V. Tymtseas' (continued)	48

Available From ACSI I-1614-J
ID 2201421

<u>Table of Contents (Continued)</u>	<u>Page</u>
IV. TACTICS	54
A. The Skillful and Decisive Conquers by Col A. Gorokhov and Lt Col P. Sarantsev	54
B. On a Seaborne Landing by M. Lerner	59
C. Coordination in a Tank Company by Major A. Mel'nikov .	63
D. Initiative of a Commander by Lt Col L. Koraun	70
E. A Battery Supports an Airborne Assault by Col I. Andrushkevich	74
F. On a Contaminated Sector by Col V. Konovalov and Lt Col M. Kharin	80
G. Pupil of the Company by Lt Col G. Kotlubayev	86
H. Small Unit Tactics in Modern Combat, Unsigned	88
7. TRAINING AND INDOCTRINATION	92
A. From Lecture to Seminar by Lt Col B. Grekhov	92
B. Thorough Knowledge Is Necessary in Order to Train and Indoctrinate by Maj Gen of Tank Troops A. Kushnir	98
C. Self-Education Is the Basic Method by Col S. Kostromin and Col P. Shutov	100
D. Soldiers Begin Their Service by Guards Col V. Sokolov and Guards Lt Col I. Balayan	102
E. The Individual Rating by Maj M. Zhabin, Capt A. Mayorov, Lt V. Astapenko and Maj. I. Dovgal'.	107
F. The First Experience and Its Lessons by Lt Col Yu. Rokhlin	109
VI. ROCKETS, ARTILLERY, AND AIR DEFENSE TROOPS	115
A. Rockets and Artillery	115
1. Training in Fire Control on the Ground by Col G. Kolesnichenko	115
2. Training Fire with a Rangefinder by Col V. Poleshayev	122
3. The Tie-In of Observation Posts by Sr Lt Ye. Volodin	123

(continued)

Available From ACSI I-1614-1
ID 2201421

Table of Contents (Continued)

	<u>Page</u>
4. Changes in the Damping Coefficient of a Gyrocompass by Col N. Stroynov	125
5. To Reduce the Time for Adjustment by Lt. Col. D. Doktorovich, Lt. Col. I. Gulyayev and Capt. G. Natenzon	126
B. Air Defense Troops	129
1. Antiaircraft Battery in an Airborne Assault by Col A. Vasyun'kov and Lt. Col. A. Ryndin	129
2. Attention to Visual Reconnaissance by Lt Col V. Yegorov	133
3. Automatic Attachment by Maj (Tech Service) N. Nikiforenko	138
VII. SPECIAL TROOPS	141
A. Engineer Troops	141
1. Engineer Reconnaissance and Clearing of Rivers by Maj D. Bogdanov	141
2. The Engineer Road Company Completes a Mission by Lt Col M. Zubkov	145
3. Preparation of a Training Program by V. Gassetov .	149
B. Signal Troops	155
1. Training Radio Operators to Meet New Demands by Gen-Maj of Signal Troops, M. Chernous and Engineer Lt Col P. Zingerman	155
2. A Miniature Communication Training Area by Gen-Maj, Signal Troops, V. Tolstyj and Lt Col M. Gurin	157
VIII. FIRE AND WEAPONS	162
A. Ladder Adjustment by Gds Lt Col F. Kulakov	162
B. Simpler and More Conveniently by Gds Sr Lt S. Kemayev	164
IX. WORK SIMPLIFICATION AND METHODS IMPROVEMENT	167
A. Trainer for an Artillery Gyrocompass by Col V. Derenyanko	167
B. Electrified Map by Lt Col A. Starostin and Maj V. Strugov	169
X. PHYSICAL TRAINING AND SPORTS	173
Army Sportsman at the Sports Spartakiade by Col M. Kotov	173

Industrial Laboratory

A translation of Zavodskaya Laboratoriya, a publication of the State Scientific-Technical Committee of the Council of Ministers of the USSR (Russian Original Dated May, 1963)

Vol. 29, No. 5, pp. 533-684

November, 1963

CONTENTS

	RUSS. PAGE	PAGE
Standardization of Mechanical Tests for Metals. <u>L. T. Timoshuk</u>	533	515
METHODS OF CHEMICAL ANALYSIS		
The Determination of Microimpurities in Inorganic Materials. <u>A. K. Babko</u>	536	518
The Determination of Trace Impurities of Zinc in Cadmium Salts and Salts of Metals Which Are Not Precipitated by Hydrogen Sulfide. <u>N. P. D'yachenko and V. T. Chulko</u>	540	522
The Determination of Trace Impurities of Copper and Lead in High-Purity Arsenic by Amalgam Polarography on a Stationary Mercury Drop. <u>G. A. Kataev</u> and <u>E. A. Zakharova</u>	542	524
The Use of Graphite Electrodes in Oscillographic Polarography for Trace Determinations. <u>Kh. Z. Brainina and N. K. Kiva</u>	545	526
The Coulometric Determination of Thallium at a Controllable Potential. <u>K. D. Omarova</u> and <u>M. T. Kozlovskii</u>	547	528
The Effect of pH on the Selectivity of Complexometric Analysis. <u>V. G. Sochevanov</u>	550	531
The Determination of Metallic Iron in the Presence of Oxidizing Agents and Free Calcium Oxide. <u>N. S. Tkachenko, P. I. Davidenko, and A. V. Dobzhanski</u>	557	536
The Use of a Titanium Electrode in the Quinhydrone Method for the Determination of pH. <u>I. E. Flis and I. M. Vorob'ev</u>	559	538
The Quantitative Determination of Silicic Acid in Glasses with Quinoline. <u>O. S. Maksimova and G. D. Yanson</u>	561	540
The Analysis of Krypton for the Nitrogen Content by Freezing Out. <u>B. O. Valters</u>	562	541
The Quantitative Analysis of Active Vinylsulfonic Dyes. <u>I. A. Kovzhin and A. A. Kharkharov</u>	564	542
The Coulometric Determination of Small Amounts of Methyl Vinyl Ketone. <u>A. P. Zozulya</u> and <u>E. V. Novikova</u>	566	543
The Determination of Sodium Cyclopentadienyl in a Reaction Mixture by High-Frequency Titration. <u>L. M. Shtifman, V. V. Lastovich, and L. G. Kuryakova</u>	567	548
EXCHANGE OF EXPERIENCE		
The Extraction Determination of Fe^{++} in Alumomagnesium Ferrites. <u>G. P. Pedan</u> and <u>O. I. Gritsenko</u>	569	546
The Determination of Strontium and Phosphates in Apatite-Nepheline Products. <u>I. G. Izhak</u>	570	547
The Potentiometric Determination of Cobalt in Steel in the Presence of Manganese. <u>P. F. Agafonov</u>	571	547
The Polarographic Determination of Organic Disulfides—Derivatives of Thio Acids. <u>A. A. Golikov</u>	572	548
Determination of Traces of Copper in Nickel Electrolytes. <u>V. N. Pavlova and N. P. Sret'nikova</u>	572	548
Analysis of Compounds of Sulfur with Chlorine. <u>V. S. Kublanovskii</u>	573	548
The Colorimetric Determination of Cyclohexanoxime in Cyclohexane in Water-Insoluble Resins. <u>M. P. Filippov, N. I. Ruch'eva, and M. S. Kodner</u>	573	549
The Express Determination of Free Hydroxyl Groups in Polyesters. <u>B. S. Khoroshaya</u> , <u>A. N. Lykova</u> , <u>R. A. Liberova</u> , and <u>S. L. Polinskii</u>	574	549

(continued)

Available From ISA

CONTENTS (continued)

	RUSS. PAGE	PAGE
METHODS OF SPECTRAL ANALYSIS		
Spectral Analysis of Isotope Compositions (Review). <u>A. G. Zhiginskii, A. N. Zaidel'</u> and <u>A. A. Petrov</u>	578	550
Determination of Hydrogen in Steels by Using the Spectral Analysis Method. <u>S. B. Shubina, A. B. Shaevich, and V. G. Dement'eva</u>	578	552
Effect of the Heat Treatment of Steel on the Results of the Determination of Carbon According to the Spectral Method. <u>I. M. Mintz</u>	581	555
Role of the Natural Aging of Specimens of Fluxed Ferrocalcium Agglomerate in Spectral Analysis. <u>I. K. Malboroda</u>	583	557
Spectral Analysis of Steels and Alloys for Rare-Earth Elements. <u>N. N. Sorokina</u> and <u>V. M. Golubeva</u>	585	559
On the Method of Spectral Analysis with Contact-Electric-Spark Sampling. <u>E. A. Slin'sh</u> and <u>T. D. Matioboeva</u>	586	560
Effect of Covering the Specimen with a Thin Water Layer on the Analytical Properties of High-Voltage Spark. <u>I. V. Podmoshenskii and V. M. Shelemina</u>	590	562
Quantitative Analysis of Products Obtained by the Chlorination of N-Butane. <u>G. A. Rudenko and A. F. Vasil'ev</u>	591	563
Application of Luminescent Spectroscopy for the Investigation of Bitumen and Petroleum Fractions. <u>A. A. Il'ina</u>	593	565
Spectral Analysis of Transformer Sheet Steel (Exchange of Experience). <u>I. V. Matyushina</u> . . .	596	567
PHYSICAL METHODS OF ANALYSIS		
Methods and Apparatus for Measurement and Control of Humidity and Moisture (Review). <u>V. I. Iatomin</u>	597	568
Method for Separation of X-Ray Diffraction Line Doublets. <u>V. V. Kukol'</u>	606	575
On the Accuracy of the Analysis of Ores by Reflection Methods. <u>V. G. Guglya</u> , <u>Chiang P'eng-ch'ei</u> , and <u>A. A. Zhukhovitskii</u>	612	579
A Technique for the Investigation of the Kinetics of Desulfation of Liquid Slags in Vacuum. <u>V. A. Grigoryan and Yu. A. Mineev</u>	614	581
On Testing Metals for Corrosion Fatigue. <u>G. V. Karpenko, V. T. Stepurenko, and Yu. I. Babel'</u>	616	583
On the Calculation of the Total Surface Area of Fine Fraction Particles. <u>G. S. Shtykhnov</u>	617	584
On the Possibility of Maintaining Low Humidity in Glove Boxes. <u>V. A. Vlasov, E. P. Voevodin</u> , <u>A. A. Lbov, N. P. Martynov, E. A. Nikitin, and G. G. Utenskov</u>	619	586
Obtaining Nickel, Copper, and Copper-Nickel Alloy Single Crystals in a Vacuum Melting Furnace. <u>B. Ya. Pines and I. G. Ivanov</u>	622	588
MECHANICAL METHODS OF TESTING		
Discussion on the Effect of Time Factors in Mechanical Tests	624	590
A Technique for Testing Sheet Materials in Biaxial Tension with a Varying Amount of Stored Elastic Energy. <u>T. K. Zilova, N. I. Novosil'meva, B. A. Palkin, N. V. Ryazanov</u> , and <u>Ya. B. Fridman</u>	635	600
Distribution of Deformation Under a Ball Indentation. <u>Yu. E. Bondarev, V. V. Varnello</u> , and <u>G. I. Tsibin</u>	640	604
The Study of Coefficients of Friction by Observation of Free Oscillations of a Pendulum. <u>B. M. Veinblat</u>	642	607
A Method for Checking the Residual-Stress Characteristics in Axis-Symmetrical Parts. <u>D. M. Shur</u>	644	608
EXCHANGE OF EXPERIENCE		
A Method for Determining the Wear of Polymer Coatings. <u>Z. P. Grozinskaya, M. R. Kiselev</u> , and <u>P. I. Zubov</u>	646	610

(continued)

CONTENTS (continued)

	RUSS. PAGE	PAGE
A Technique for Measuring Work Hardening of Cold-Bent Sections. <u>V. A. Gamershtein</u> and <u>E. P. Akimov</u>	647	610
INSTRUMENTS AND LABORATORY TECHNIQUE		
Nuclear Magnetic Resonance Equipment of Medium Resolution. <u>P. M. Borodin</u> and <u>E. N. Sventitskii</u>	648	611
Microwave Spectrum Comparator for the Investigation of Absorption Spectra of Molecules. <u>V. F. Volkov and N. N. Vyshinskii</u>	651	614
Thyration Drive to Inertia-Excitation Fatigue Testing Machines. <u>M. M. Kobrin</u> and <u>E. M. Malinkovich</u>	653	618
Device for the Automatic Recording of Strain during Long Term Heat-Resistance Test. <u>V. I. Kovpak</u>	655	617
Furnace for Fatigue-Testing Metals in Air at Temperatures Up to 1500°C. <u>D. V. Lebedev</u> , <u>A. K. Melekhin</u> , and <u>B. M. Ovsyannikov</u>	656	618
Device for Testing Standard-Bar Concrete Specimens in Bending. <u>V. G. Tsimbler</u>	658	620
Gas Devices for Measuring Surface Tension in Liquid Interfaces. <u>P. P. Pugachevich</u>	660	622
Dilatometer for the Investigation of Thermal Expansion of Graphite. <u>S. V. Shulapov</u> , <u>M. N. Dorzhiev</u> , and <u>V. N. Plechov</u>	663	624
Apparatus for Measuring the Thermal Coefficient of Linear Expansion of Polymers by Means of IZA-2 Comparator. <u>N. I. Element</u>	664	625
Device for Analyzing Alloys by the Thermo-SMF Method. <u>A. K. Turnanov</u> and <u>N. I. Chabanenko</u>	666	627
Device for Taking Metal and Slag Samples from a Converter without Interrupting the Blow. <u>D. I. Turkenich and V. V. Smoktii</u>	667	628
Mechanical Laboratory Devices for Taking and Averaging Samples of Granular Materials. <u>S. N. Rudanovskii</u>	668	629
FROM INDUSTRIAL LABORATORIES		
The Central Chemical Laboratory of the Noril'sk Mining and Metallurgy Combine Competes for the Title of Communist Labor Team. <u>V. S. Belokopytov</u> and <u>N. P. Strelnikova</u>	669	630
The Staff of the Laboratory of the Dzerzhinskii Glass Factory Is a Communist Labor Team. <u>E. N. Shishkov</u> and <u>V. M. Ivanov</u>	670	631
On the Introduction of Nondestructive Test Methods. <u>A. K. Denel</u>	671	632
ORGANIZATION OF LABORATORY WORK AND EXCHANGE OF VIEWS		
Planning of Plant Laboratories at the Level of Communist Building Requirements. <u>V. P. Kotova</u>	673	633
Correction to the Curve of Actual Stresses Proposed by <u>N. N. Davidenkov</u> and <u>N. I. Spiridonova</u> , <u>I. I. P. Renne</u> ; <u>H. N. N. Davidenkov</u>	674	634
INFORMATION		
Practical Polarography Course.	679	637
REVIEWS AND BIBLIOGRAPHY		
"Microhardness of Metals," by <u>V. M. Glazov</u> and <u>V. N. Vigdorovich</u> . Reviewed by <u>S. A. Pogodin</u> and <u>E. S. Berkovich</u>	680	638
A New Book on the Application of Punched Cards. <u>S. M. Raiski</u>	681	639
Mikhail Tikhonovich Kozlovskii (On His Sixtieth Anniversary).	682	640
UDM-1M Ultrasound Pulse Flaw Detector	683	Back cover
IAD-2 Acoustic Impedance Flaw Detector	684	Back cover

Available From ISA

Industrial Laboratory

*A translation of Zavodskaya Laboratoriya, a publication of the
State Scientific-Technical Committee of the
Council of Ministers of the USSR
(Russian Original Dated June, 1963)*

Vol. 29, No. 6, pp. 685-826

November, 1963

CONTENTS

	RUSS. PAGE	PAGE
Analytical Instrument Construction and the Problems in Its Development.	685	643
METHODS OF CHEMICAL ANALYSIS		
Direct Photometric Determination of Rare-Earth Elements by Means of Chromatographic Spots on Paper. <u>A. K. Babku, M. E. Vdovenko, and M. V. Kopa</u>	687	645
An Isotopic Method for Determining Oxygen in Metals. <u>E. N. Vito</u>	690	649
Determination of the Aluminum Content of Cryolite and of Aluminum Fluoride. <u>V. I. Zabiyako and M. B. Saltykova</u>	694	652
The Complexometric Determination of Aluminum in Products from Titanium Manufacture. <u>V. N. Tikhonov and M. Ya. Grankina</u>	696	653
The Amperometric Titration of Ferrous Ion in Oxalate Baths with a Solution of Ceric Sulfate. <u>V. I. Bogovina, V. P. Novak, and V. F. Mal'tsev</u>	697	654
The Polarographic Determination of 1,1-Nitromethylcyclopentane and Nitrobenzene in Nitrocyclohexane. <u>P. M. Zaitsev and Z. V. Zaitseva</u>	698	656
The Polarographic Determination of Styrene, in the Form of Pseudonitrosite, in Polystyrene. <u>T. A. Alekseeva, I. P. Kruglyak, and V. D. Bezuglyi</u>	700	657
Determination of the Solubility of Gases by the Method of Gas-Liquid Partition Chromatography. <u>A. D. Zorin, A. E. Ezheleva, and G. G. Devyatlykh</u>	702	659
The Determination of Benzene in Coke-Oven Gas. <u>I. A. Panfilov and V. V. Noskov</u>	705	662
Analysis of Products from the Catalytic Hydrogenation of Furan by Means of Gas-Liquid Chromatography. <u>T. A. Polyakova, T. A. Sokolova, and Ya. A. Tsarfin</u>	707	664
The Separation and Determination of Phthalic Acids by Chromatography on a Silica Gel Column. <u>A. I. Kamneva and E. S. Panfilova</u>	709	666
Determination of the Vapor of Cyclopentadienytricarbonylmanganese in Air. <u>M. S. Bykhovskaya</u>	710	667
The Determination of Hexamethylene Dithiocyanate in the Control of Its Production. <u>D. I. Kostin and M. A. Koptseva</u>	712	669
A Coulometric Method for Determining Low Bromine Numbers with a BI-1 Analyzer. <u>Z. V. Masiennikova, S. S. Denisov, and V. P. Muzychenko</u>	714	671
Indicator Methods for Determining Nickel Carbonyl in Air. <u>E. A. Peregud and B. S. Boikina</u>	718	674
The Determination of Halogens in Readily Volatile Organic Compounds. <u>R. M. Bekher, N. I. Vasilyuk, and O. Ya. Man'ko</u>	720	675
METHODS OF SPECTRAL ANALYSIS		
A Scintillation Method for the Spectral Determination of Tantalum and Niobium in Ores.		

Available From ISA

(continued)

CONTENTS (continued)

	RUSS. PAGE	PAGE
<u>ZAVODSKAYA LABORATORIYA</u> , Vol XXIX, No 6, 1963.		
<u>Ya. D. Raikbaum, V. D. Malykh, and M. A. Luzhnova</u>	721	677
<u>Some Spectroscopic Studies of the Gas Cloud of an Arc Discharge with Powder Samples Blown in</u> . <u>I. M. Nagibina</u>	724	680
<u>The Use of Suliding Agents in Spectral Analysis</u> . <u>N. F. Zakhariya, O. P. Turulina, L. I. Karpenko, and I. A. Voloshchenko</u>	728	683
<u>Fluoridation of Samples in Spectral Analysis</u> . <u>V. L. Ginzburg, N. P. Glukhovetskaya, and L. A. Lerner</u>	729	684
<u>The Determination of High Contents of Elements in Alloys with Photoelectric Recording of the Spectrum</u> . <u>B. L. Grinzaid, D. G. Butomo, Yu. P. Korolev, F. D. Korobko, and E. S. Burova</u>	731	686
<u>The Transmission Spectra of Lanthanides in Finely Crystalline Preparations and Their Analytical Use</u> . <u>R. A. Kravchenko-Berezinoi</u>	734	688
<u>A Chemicoo-Spectral Method for the Analysis of Very Pure Alkalies</u> . <u>N. M. Kuz'min, V. P. Belyaev, V. R. Kalinachenko, and L. M. Yakimenko</u>	737	691
<u>Some Uses of the Spectral-Isotopic Method for Determining Gases in Metals</u> . <u>A. N. Zaidel', T. F. Ivanova, A. A. Petrov, V. V. Fedorov, and N. M. Chumakova</u>	740	693
<u>The Analysis of Magnesites by a Spectral Method</u> . <u>B. I. Andreev, G. I. Neudachin, and R. I. Petukhova</u>	742	695
<u>The Use of Infrared Spectroscopy for the Study of Cellulose (Review)</u> . <u>B. I. Stepanov and R. G. Zlibankov</u>	743	696
<u>Quantitative Analysis of the Reaction Products from Butyric Anhydride Manufacture</u> . <u>A. G. Ushakova, V. V. Zharkov, and V. N. Mironova</u>	747	699
<u>Quantitative Determination of Diketene by Infrared Absorption Spectroscopy</u> . <u>V. V. Zharkov</u>	749	701
<u>A Study of Structural Transformations in Trifluorostyrene by Means of Absorption Spectroscopy</u> . <u>T. V. Kreitser and L. I. Tarutina</u>	750	702
<u>Quantitative Determination of the Cis-Trans Configuration of Synthetic Polyisoprenes</u> . <u>K. V. Nel'son, L. S. Skripova, and N. V. Kozlova</u>	753	704
<u>A Study of the Electrocracking of Natural Gas by the Method of Vibration Spectroscopy</u> . <u>S. V. Starodubtsev, Sh. A. Ablyayev, F. Bakhramov, D. G. Keitlin, and È. N. Yusova</u>	756	707
<u>The Spectral Analysis of Mixtures of Chlorosilanes and the Determination of Phenyl Radicals in Polymethylphenylsiloxanes</u> . <u>L. A. Efremova and K. K. Popkov</u>	757	708
<u>A Study of Thermal Cross-Linking of Insoluble Polymers by Means of Quantitative Infrared Analysis</u> . <u>M. Z. Al'tschuler, A. I. Marei, K. V. Nel'son, and L. S. Skripova</u>	760	710
PHYSICAL METHODS OF INVESTIGATION		
<u>Internal Friction and Resonance Frequency as Means of Determining the Depth of Intercrystallite Fracture in Metals</u> . <u>A. M. Maksimov</u>	763	713
<u>Methods of Evaluating Inclusions in Electroslag Metal</u> . <u>I. A. Pavperova</u>	768	718
<u>Coercive-Force Measurements on Components</u> . <u>E. N. Chechurina, N. M. Benenson, and L. S. Vinogradova</u>	771	722
<u>Calculation of the Characteristics of Ferroprobes for Magnetic Flaw Detection</u> . <u>I. I. Kifer and M. S. Tseplyaeva</u>	774	725
<u>Quantitative Analysis of Iron Ores by Scattered β-Radiation</u> . <u>N. V. Gorbatyuk</u>	779	730
EXCHANGE OF EXPERIENCE		
<u>A Technique for Determining the Completion of the Polymerization Process of Plastics</u> . <u>P. F. Shubenskin</u>	782	732
<u>A Technique for Determining the Solidification Point of Waxes and Wax-Like Materials and Compounds</u> . <u>M. M. Gerner and E. A. Rudnitskaya</u>	782	733
<u>A Rapid Technique for the Determination of the Water Content of Petroleum Products</u> .		

(continued)

Available From ISA

CONTENTS (continued)

ZAVODSKAYA LABORATORIYA, Vol. XXX, No. 6, 1963.

	PAGE	RUSS. PAGE
<u>O. A. Tarasov</u>	783	733
Examination of the Macrostructure of Experimental Titanium Steel Railroad Rails.		
<u>A. N. Mirza and E. A. Shur</u>	784	734
MECHANICAL METHODS OF TESTING		
A Technique for Heat-Resistance Testing with Varying Heat Transfer. <u>N. I. Tikhonov</u> ,		
<u>Yu. I. Danilov, V. T. Yanchenko, and N. P. Zakhareva</u>	786	736
On a Relative Evaluation of the Thermal Fatigue Strength of Materials. <u>V. I. Egorov</u>		
<u>and N. D. Sobolev</u>	790	739
On the Problem of Thermal Fatigue of Alloys with the Boundary Conditions Taken		
into Account. <u>N. S. Mozharovskii</u>	794	743
The Comparison of Results of Short- and Long-Term Thermal Fatigue Tests. <u>T. F. Balandin</u> . .	797	746
On the Evaluation of Service Life during the Creep Process with the Load Applied		
in Stages. <u>V. N. Gulyayev and M. G. Kolesnichenko</u>	799	748
The Evaluation of the Fatigue Limit for Long Service Life. <u>I. I. Trunin, M. I. Solonouts,</u>		
<u>and L. L. Chukhina</u>	803	752
Methods for Plotting True Compression Stress Diagrams for Large and Small Strains.		
<u>I. M. Pavlov and V. M. Zharov</u>	806	754
A Technique for the Investigation of Abrasive Wear of Metals. <u>V. N. Tkachev</u>	810	758
Testing Machines for the Study of Friction and Wear Processes at High Rate of Slip.		
<u>N. L. Golego</u>	813	761
Device for Studying the Antifriction Properties of Materials in Highly Active Media.		
<u>S. N. Ganz, V. D. Parkhomenko, and E. P. Petrunin</u>	815	763
Bending Test Machine for Wire While Moving on Rollers in a Stretched Condition.		
<u>B. L. Sklyar</u>	817	765
INFORMATION		
Scientific-Engineering Conference on the Use of Ultrasonic Flaw Detection		
and Radioscopy for the Quality Control of Welded Joints. <u>A. K. Gurvich and L. Kuz'mina</u>	820	766
Eleventh Conference on Luminescence. <u>D. P. Shcherbov</u>	821	767
REVIEWS AND BIBLIOGRAPHY		
Rapid Methods of Analysis for Electrolytes in Plating Baths. <u>A. A. Popel</u>	822	768

Available From ISA

Industrial Laboratory

A translation of Zavodskaya Laboratoriya, a publication of the State Scientific-Technical Committee of the Council of Ministers of the USSR
(Russian Original Dated July, 1963)

Vol. 29, No. 7, pp. 827-966

December, 1963

CONTENTS

	PAGE	RUSS. PAGE
The Work of Industrial Laboratories Toward Technical Progress	827	771
METHODS OF CHEMICAL ANALYSIS		
The Theoretical Bases of and Interrelations Between Electrometric Methods of Chemical Analysis (Review). <u>P. K. Agasyan and E. R. Nikolaeva</u>	829	773
The Determination of Copper in Various Objects by Means of 2,2'-Bicinchoninic Acid. <u>I. S. Mustafin, N. S. Frumina, and V. S. Kovaleva</u>	838	782
The Determination of Rhenium in Alloys by Means of Diphenylcarbazide. <u>D. I. Ryabchikov and L. V. Borisova</u>	841	785
The Fluorimetric Determination of Rhenium in Ores with Rhodamine 6G. <u>A. I. Ivankova and D. P. Shcherbov</u>	843	787
The Photometric Determination of Rhenium in Titanium Alloys by Means of 8-Mercaptoquinoline. <u>K. I. Egorova and A. N. Gurevich</u>	848	790
The Complexometric Determination of Molybdenum in Permalloy and Ferromolybdenum. <u>V. D. Konkin and V. I. Zhikhareva</u>	847	791
The Trilonometric Determination of Calcium Oxide in Slags Using Fluorexone. <u>A. A. Fedorov, F. A. Ozerskaya, and E. N. Streltseva</u>	849	794
The Determination of Germanium As a Complex Pyrocatechatogermanate. <u>V. A. Nazarenko and A. M. Andrianov</u>	850	795
The Selection of Conditions for Ashing Coal for Germanium Determination. <u>M. A. Menkovskii and A. N. Aleksandrova</u>	853	797
Polarographic Control of Nitroglycerol in Dilute Solutions Containing Nitric Acid and Sulfuric Acids. <u>E. V. Khamskii and V. A. Il'ina</u>	855	799
The Determination of Propylene Oxide in Its Hydration Products. <u>N. G. Polyanskii and N. L. Potudina</u>	857	802
EXCHANGE OF EXPERIENCE		
The Photocolorimetric Determination of Cerium in Carbon Steels by Means of O-Tolidine. <u>E. A. Nechaeva and T. M. Kholodkova</u>	859	803
Extractive Photometric Determination of Copper in Alloys At An N-Acetyl- Thiocyanate Complex. <u>Sh. T. Talipov, K. G. Nigai, and E. L. Abramova</u>	860	804
The Determination of Aluminum with Hydroxyquinoline in the Presence of Large Amounts of Uranium. <u>A. V. Vinogradov and V. S. Shpilev</u>	860	804
Rapid Methods for the Analysis of Brown Coal Ash. <u>V. I. Volokhova</u>	861	804
A Rapid Method for Determining Germanium in Coal Tars and Pitches. <u>K. P. Medvedev, L. M. Khar'kina, V. M. Petropol'skaya, and K. A. Nikitina</u>	862	805
Spectrophotometric Determination of the Main Component in Commercial Urea. <u>Yu. I. Moshkin and A. I. Finkel'shtein</u>	862	805
The Determination of Nitrogen in the Nitrides of Boron and Silicon. <u>S. V. Syavtsillo, A. M. Nikol'skaya, and T. E. Mashko</u>	863	806

(continued)

Available From ISA

CONTENTS (continued)

	PAGE	RUSS. PAGE
ZAVODSKAYA LABORATORYA, Vol. XXIX, No. 7, 1963.		
The Determination of Phenanthrene in Mixtures of Aromatic Hydrocarbons. <u>V. M. Bednov</u> , <u>E. A. Sukhorukova, and V. N. Novikov</u>	864	806
The Determination of Chlorine in Polychlorovinyl and Perchlorovinyl Resins by the Reduction Method. <u>G. G. Petukhov and T. V. Guseva</u>	866	806
PHYSICAL METHODS OF INVESTIGATION		
Methods for Testing the Strength of Adhesive Joints (Review). <u>Yu. I. Markin</u> and <u>S. S. Voyutskii</u>	867	808
Experimental Determination of the Contrast in X-ray Images of Flaws. <u>A. M. Yakobson</u> and <u>K. M. Dzhgalyan</u>	871	811
Detection by the Thermal Etching Method of the Chemical Heterogeneity of Structural Components of Alloys. <u>G. A. Faivilevich</u>	873	814
The Investigation of the Kinetics of the Oxidation of Metals During Heating by the Method of Selective Coloring. <u>E. I. Antipova and M. G. Lozinskii</u>	876	815
The Exposure of the Microstructure of Some Ferrites. <u>S. A. Bliseev</u>	879	817
The Measurement of the Hardness of Strained Steel Articles by Coercive Methods. <u>N. I. Noskova, V. D. Sadovskii, B. K. Sokolov, and G. S. Tomilov</u>	881	818
The Use of Deposited Transmitters for Determining Residual Stresses in the Hardened Layer of Large Parts. <u>B. A. Brailovskii and F. I. Ivanov</u>	883	821
Diffusion Method for Measurement of Hydrogen Concentration in Gas Mixtures. <u>V. P. Ryabov</u> , A Method for Obtaining X-ray Pictures from Materials Subject to Decomposition in Air. <u>V. A. Kutsen, E. I. Smagina, and R. N. Morzaedova</u>	886	824
888	826	
MATHEMATICAL METHODS OF INVESTIGATION		
Discussion of the Treatment of Results of Longevity Tests of Samples from Several Batches of a Metal	889	827
A Statistical Technique for Evaluating Fatigue Tests on Steel Structures. <u>A. A. Bat'</u> and <u>A. I. Kochetov</u>	899	838
The Use of the Distribution Theory of Extreme Values of a Sample in the Evaluation of Strength Tests. <u>N. G. Lindquist</u>	903	841
The Use of Mathematical Statistics in Testing Radiometric Equipment. <u>V. B. Luk'yanyov</u> , <u>A. V. Makarov, and A. D. Fedin</u>	906	844
Some Problems in the Documentation of Molecular Spectra by Punched Cards. <u>V. T. Aleksanyan and Z. B. Barinova</u>	911	849
EXCHANGE OF EXPERIENCE		
A Fast Method of Calculating the Numerical Characteristics of a Series of Experimental Values <u>A. M. Rostovtsev</u>	919	856
MECHANICAL METHODS OF TESTING		
A Technique for Fatigue Testing of Flat Fiber Glass Plastic Specimens in Pure Bending Under a Specified Moment. <u>V. A. Bershtein and L. A. Glikman</u>	921	858
A Method for Determining the Strength of Sheet Glass. <u>F. F. Vitman and V. P. Pukh</u>	925	863
The Determination of the Dynamic Characteristics of Polymers by the Resonance Method. <u>Yu. V. Zelenov, G. M. Bartenev, and G. K. Demishev</u>	930	868
The Long Term Shear Strength of Rubber-Metal Specimens. <u>V. N. Shlyapina</u> , <u>I. E. Vinitskii, and G. G. Popov</u>	934	872
Measurement of the Microhardness of Brittle Transparent Materials Under Load. <u>Yu. S. Boyarskaya and M. I. Val'kovskaya</u>	936	874
Technique and Equipment for Testing Ribbon-Shaped Materials for Pure Bending at Temperatures Up to 600°C. <u>I. B. Kalachev</u>	938	876

(continued)

Available From ISA

CONTENTS (continued)

	PAGE	RUSS. PAGE
Obtaining Temperature Fields in Flat Models During Investigations by the Photothermoclastic Method. <u>V. I. Savchenko and T. Sh. Chemis</u>	941	879
IN THE INDUSTRIAL LABORATORIES		
The 20th Anniversary of the Central Chemical Laboratory of the Chelyabinsk Metallurgical Plant. <u>M. O. Zakhvatkin</u>	944	881
NEW LABORATORIES IN THE PLANTS		
Automation Laboratory in the Novolipetsk Metallurgical Plant. <u>N. A. Popov</u>	947	883
The Use of Mathematical Statistics at the Omsko-Khailiov Metallurgical Combine. <u>I. N. Vamavskii and A. Chubarev</u>	948	884
Laboratory for Economics and Organization of Production. <u>I. Lehti</u>	949	884
EXPERIENCE OF FOREIGN LABORATORIES		
The Laboratory of the Fiat Combine (Italy). <u>A. A. Gol'denberg</u>	950	885
ORGANIZATION OF LABORATORY WORK AND EXCHANGE OF IDEAS		
Correction to the G. I. Pogodin-Aleksеев Method on the Study of Properties of a Metal During Impact Bending. <u>V. M. Chernyshev</u>	953	888
The Indirect Determination of Silica in Blast-Furnace Slags. <u>M. I. Shvaiger</u>	955	890
INFORMATION		
Machines for Friction and Wear Testing. <u>B. L. Smushkovich and V. S. Golubkov</u>	958	890
Automatic High Frequency Capacitive Conductivity Meter AVK-60-2. <u>O. B. Andreev</u>	959	893
All-Union Symposium on Radioactivity Analysis. <u>Z. E. Gauer</u>	960	894
The Monte Carlo Method of Statistical Experimentation and its Realization in Numerical Computing Machines. <u>N. P. Buslenko and Yu. A. Shreider</u>	961	895
"Organization of Scientific Research in the Industry of the USA" [in Russian]. Reviewed by <u>T. A. Vvedenskii</u>	962	895
INFORMATION FROM ABROAD	963	896

Available From ISA

ZHURNAL EKSPERIMENTAL'NOI I TEORETICHESKOI FIZIKI

SOVIET PHYSICS JETP

Vol. XLIV, No. 6, 1963

DECEMBER, 1963.

CONTENTS

	Page.	Page.	Russian Reference
The (p, α) Reaction at 20 MeV	1175	44.	1753
Production of Strong Shock Waves During Electrical Discharges in Gaps	1180	44.	1760
Elastic Scattering of Deuterons by Chromium and Zinc Isotopes	1183	44.	1765
Ratio of the Cross Sections for the Production of the Isomer and Ground State of Nuclei in the (p, h) Reaction at Energies from the Threshold to 20 MeV	1186	44.	1770
Electrical Discharge in a Supersonic Air Flow	1190	44.	1775
Determination of the Size of Nuclei from the Differential π^0 -Meson Photoproduction Cross Sections	1193	44.	1780
Angular and Energy Distributions of Photoneutrons from Bismuth, Gold, and Tantalum	1200	44.	1787
Search for Secondary Deuterium and Tritium Capture Reactions	1208	44.	1800
Wang Ch'uan-P'eng, V. N. Melchedek, V. N. Rybeckov, and R. A. Shimchak	1213	44.	1806
N. L. Grigorov, I. N. Efroeva, V. S. Murzin, L. G. Mishchenko, I. D. Rapoport, B. O. Resonance Scattering of γ Quanta on Cu^{65} and Tl^{203}	1217	44.	1811
D. K. Kaipov, R. B. Begzhanov, A. V. Kut'minov, and Yu. K. Shubrey	1222	44.	1818
Electron Capture and Loss on Passage of Fast Atoms Through Molecular Gases	1226	44.	1823
Two-Electron Charge Exchange of Low-Energy Protons	1228	44.	1826
Magnetic Properties of a Single Crystal of Scandium	1230	44.	1829
Ground State of the Be^4 Nucleus	1232	44.	1834
Termy Fission of Plutonium	1235	44.	1837
N. A. Perfilov, Z. I. Bolov'eva, R. A. Filov, and G. I. Khlebnikov	1242	44.	1847
Diagram of State for He^3 - He^4 Solutions: Phase Stratification and Solidification Curves	1246	44.	1852
Coherence and Time-Scanning of the Emission Spectra of a Ruby Laser	1251	44.	1859
Formation of Helium Mesic Atoms in a Hydrogen-Helium-Gas Mixture	1254	44.	1864
O. A. Zal'midoroga, M. M. Kulyukin, R. M. Sulyaev, A. I. Filippov, V. M. Tsupko-Sitnikov, and Yu. A. Shcherbakov	1257	44.	1869
Temperature Dependence of the Spin-Lattice Relaxation Time of V^{4+} in TiO_2	1260	44.	1873
The Ionization-Momentum Relation for Various Particles in the Relativistic Region	1262	44.	1876
K. I. Alekseeva, G. B. Zhdanov, M. I. Tret'yakova, and M. N. Shcherbakova	1268	44.	1884
Emission of Li^3 Fragments in the Disintegration of Ag and Br Nuclei by 19-BeV Protons	1271	44.	1889
N. P. Bogachev, A. G. Volod'ko, E. L. Grigor'ev, and Yu. P. Merekov	1276	44.	1896
The Isotope Effect in the Magnitude of the Unit-Cell Volumes of Nitrogen Isotopes	1279	44.	1901
V. S. Kogan and T. G. Omarov	1283	44.	1907
Investigation of the Effect of High Pressure on the Superconducting Properties of Cadmium	1289	44.	1915
N. B. Brandt and N. I. Ginzburg	1292	44.	1920
Operation of a Four-Level Optical Generator	1302	44.	1936
Yu. A. Ahai'ev, V. F. Egorova, A. A. Mak, D. S. Prilezhaev, and B. M. Sedov	1306	44.	1941
Resonance Absorption of Gamma Quanta in Barium, Strontium, and Calcium Stannate	(continued)		
Pham Zuy Hien, V. S. Shpinel', A. S. Viskov, and Yu. N. Venevtse	(continued)		
Concerning One Model of $\pi\pi$ Interaction	(continued)		
A. A. Afonin and Ya. I. Granovskii	(continued)		
Application of the Method of Majorization of Feynman Diagrams for Proving the Dispersion Relations	(continued)		
On the Relations Among Different Methods for Describing the Interaction of High-Energy Particles	(continued)		
I. I. Rozen and D. S. Chernavskii	(continued)		
Time Correlations of Quantities Described by the Kinetic Equations	(continued)		
V. M. Fain	(continued)		
Instability Theory for a Low-Pressure Inhomogeneous Plasma in a Strong Magnetic Field	(continued)		
A. A. Galeev	(continued)		
Theory of Electron Spectra of Bismuth Type Metals in a Magnetic Field	(continued)		
L. A. Falkovskii	(continued)		
Covariant Conservation Laws in the General Theory of Relativity	(continued)		

Available From Amer Inst Phys
Sov Phys - JETP
Vol XVI, No 6

CONTENTS (Contd)	Page	KURSUKI Reference
Determination of the Fission Threshold from Experiments on the (d, pf) and (γ , f) Reactions	1312	44, 1950
Oscillations of a Low Pressure Inhomogeneous Plasma	1314	44, 1953
Galvanomagnetic Effects in Graphite and the Deformation of the Electron Spectrum of Graphite Under Pressure	1321	44, 1964
Behavior of Cross Sections Near Threshold of a New Reaction in the Case of a Coulomb Attraction Field	1328	44, 1974
Invariant Parametrization of Local Operators	1333	44, 1982
Anomalous Plasma Diffusion Caused by Oscillations	1340	44, 1993
Moments of Inertia of Beta and Gamma Vibrational Bands	1348	44, 2001
The Definition of the Symmetry Group of a Quantum System. The Anisotropic Oscillator	1349	44, 2007
Theoretical Determination of the Sign of the Mass Difference Between the K_1^0 and K_2^0 Mesons	1352	44, 2011
The Kinetics of Induced Mossbauer Radiation	1355	44, 2014
The Contribution of Strong Interactions to the Photon Green's Function	1360	44, 2023
Shifts and Broadening of Energy Levels of Single-Electron Atoms and Ions in High-Temperature Plasma	1368	44, 2029
Dielectric Constant of Bismuth-Type Metals in the Infrared Region	1372	44, 2039
Sound in Liquid Helium II Near Absolute Zero	1384	44, 2058
Regge Poles in Quasiclassical Potential Well Problems	1387	44, 2068
Limitations on the Asymptotic Values of Cross Sections Imposed by the Regge Pole Hypothesis	1398	44, 2079
Radiation Corrections to Scalar Meson Pair Production in Electron-Positron Collisions	1400	44, 2081
On the Charged Vector Theory of Lee and Yang	1404	44, 2087
Direct Nuclear Reactions and Interaction in Initial and Final States	1408	44, 2090
The Compton Effect on Relativistic Electrons and the Possibility of Producing Beams of Hard γ Rays	1412	44, 2100
Allowance for the Effect of Pressure in the Theory of Second-Order Phase Transitions (with Application to the Case of Superconductivity)	1415	44, 2104
Construction of a Local Quantum Field Theory Without Ultraviolet Divergences	1417	44, 2107
Stability of Rotation of a Superfluid Liquid	1424	44, 2118
Hollow Superconductors in a Magnetic Field	1426	44, 2122
The Theory of the Acoustooelectric Effect	1432	44, 2131
Atomic Photoeffect at High Energies	1438	44, 2142
Electrical Conductivity and Galvanomagnetic Coefficients of Semimetals and Degenerate Semiconductors in a Strong Electric Field	1444	44, 2150
Random Force Method in Turbulence Theory	1449	44, 2155
Classical Models of a Charged Particle with Angular Momentum	1455	44, 2169
Matrix Structure of the Meson-Photon, Nucleon-Photon, and Photon-Photon Scattering Amplitudes at High Energies	1468	44, 2174
LETTERS TO THE EDITOR		
The Effects of a Laser Beam in a Liquid	1463	44, 2180
Abrupt Change in Probability of the Mossbauer Effect at the Phase Transition in Ferroelectrics	1465	44, 2182
Contribution of Regge Poles to the Total Cross Sections at High Energies	1466	44, 2184
Some Methods for Polarization and Analysis of Polarization of Intermediate Energy Neutrons	1467	44, 2185
Direct Measurements of the Linear Flow Rate of a HEII Film	1468	44, 2187
Standing Magnetoplasma Waves in Bismuth Single Crystals	1470	44, 2190
The Use of a Laser in the Investigation of the Combination Scattering Spectra of Colored Powders	1473	44, 2193
Correction to the Article "Scattering of Electrons by Electrons at High Energies and the Dipole Structure of the Electron" (JETP 42, 1103, 1962, Soviet Phys. JETP 15, 762, 1962)	1474	44, 2194
Analytical Subject Index	1475	44, 2225
Author Index	1484	44, 2213
Errata	1510	

JOURNAL OF
**GENERAL
 CHEMISTRY**
 OF THE USSR

A translation of ZHURNAL OBSHCHEI KHIMII

A publication of the Academy of Sciences of the USSR

• 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
 227 West 17th Street, New York 11, N. Y.

Volume 33, Number 2

February, 1963

CONTENTS

	P A G E
	ENQ. RUSS.
A Study of the Chemical Changes in the Processes of β -Decay of RaE in Combination in the Form of its α -Naphthyl Derivatives — V. D. Nefedov, S. A. Grachev, and S. Gluvka	325 333
Use of Double Labeling to Detect Glycine Formed from (^{14}C -Methylene)-Succinic Acid As a Result of the β -Decay of the Carbon-14 — V. D. Nefedov, G. A. Skorobogatov, K. Novak, G. Pluchennik, and Yu. K. Gusev	331 339
The Reciprocal Ternary System of the Acetates and Isovalerates of Sodium and Potassium — E. I. Pochtakova	334 342
Syndones and Syndone Imines. XVI. Polarographic Investigation of the Syndone Imines — V. G. Mairanovskii, L. B. Kholodov, and V. G. Yashunskii	340 347
Polarographic Investigation of <i>p</i> -Phenylbenzaldehyde — V. D. Bezuglyi and E. A. Preobrazhenskaya	348 353
Cyclopropanes and Cyclobutanes. XXVII. Cyclopropylalkylbenzenes — R. Ya. Levina, P. A. Gambitskii, V. N. Kostin, and E. G. Treshchova	352 359
Cyclopropanes and Cyclobutanes. XXVIII. <i>p</i> -Acetylphenylcyclopropane in the Synthesis of Para-Substituted Cyclopropylbenzenes — R. Ya. Levina, P. A. Gambitskii, V. N. Kostin, S. M. Shostakovskii, and E. G. Treshchova	358 366
Cyclopropanes and Cyclobutanes. XXIX. Bromination of Arylcyclopropanes — R. Ya. Levina, P. A. Gambitskii, and E. G. Treshchova	364 371
Investigations in the Field of the Synthesis and Reactions of Unsaturated Organosilicon Compounds. XVI. Synthesis and Properties of Some Secondary Acetylenic Alcohols Containing Silicon in the γ -Position — I. A. Shikhiev and I. A. Aslanov	369 377
Synthesis and Catalytic Hydrogenation of 5-(1-Hydroxycyclohexyl)-2,3,-Dimethylpent-4-yn-3-ol and its Acetates — A. I. Nogaiedeli and Ts. N. Vardosnidze	372 379
Conjugation Phenomena in Systems with a Tetrahedral Atom. II. Vinylphosphonic and Vinylphosphinic Acids — M. I. Kabachnik, T. A. Mastryukova, and T. A. Melent'eva . . .	375 382

Available From CB

(continued)

CONTENTS (continued)

	RUSS. PAGE	PAGE
Salts of Dialkyl Esters of Phosphorothionic Acid. V. Reaction of Salts of Dialkyl Esters of Phosphorothionic Acid with Aromatic Halogen Derivatives - V. G. Pesin, A. M. Khalatskii, and I. G. Vitenberg	382	388
Synthesis of Some Derivatives of Monoethanolmethylamine - A. F. Nikolaev, M. E. Rozenberg, N. V. Danilev, and G. P. Tereshchenko	385	391
Synthesis of Aminosulfides and Aminosulfones. XXVII. Synthesis of Some Sulfonamide Derivatives of Salicylic Acid - I. Kh. Fel'dman and N. M. Vinokurova	388	394
Reactions of Cyanamide with Anhydrides of Aliphatic Acids. I - L. B. Kretov and A. P. Momenko	391	397
Amides and Hydrazides of Oxalic Acid. II. Acyl Derivatives of Arylhydrazides of N-Substituted Oxamic Acids - P. A. Petyunin and A. V. Storozheva	394	400
Mechanism of the Reaction of Ethyllithium with Ethyl Iodide - F. S. D'yachkovskii and A. E. Shilov	400	406
Derivatives of 2,2'-Diphenic Acid. II. Substituted Monoamides and Monoaryl Esters of 2,2'-Diphenic Acid. Their Insecticidal and Herbicidal Activity - L. P. Kulev, R. N. Gireva, and G. M. Stepanova	405	411
Conjugated Systems. CLXVI. Addition of Butyllithium and tert-Butyllithium to Vinyl-tert-butylacetylene - A. A. Petrov, I. A. Maretina, and V. A. Kormer	407	413
Conjugated Systems. CLXVII. Nuclear Magnetic Resonance Spectra and Structure of Dienyne Hydrocarbons - A. A. Petrov, V. B. Lebedev, and Yu. I. Porfir'eva	410	418
Conjugated Systems. CLXVIII. Direction of the Addition of Hydrogen Halides to Dienyne Hydrocarbons - to Vinylallylacetylene and its Homologs - A. A. Petrov and Yu. I. Porfir'eva	413	419
Reaction of Hydrochlorides of Butadiene and Isoprene with Sodioacetoacetic Ester - L. I. Bunina-Kdrivukova and A. A. Petrov	421	427
Prototropic Isomerization of Esters of Alkenylphosphonic Acids - B. I. Ionin and A. A. Petrov ..	426	432
Lipides. XVIII. Synthesis of Glyceride Component of Corn Oil - G. A. Serebrennikova, E. N. Zvonkova, G. G. Zapsochnaya, I. K. Sarycheva, and N. A. Preobrazhenskii	431	437
Chloro-Substituted Benzopyrrolomonomethinecyanines - A. I. Tolmachev, V. P. Sribnaya, and L. V. Shcheglova	433	440
Synthesis of Meso-Arylthiacarbocyanines in the Cleavage of the Pyrylium Ring of Pyrylocyanines - A. I. Tolmachev and L. V. Shcheglova	440	448
Anhydride of Hexitol with a β -Ring - 1,3-Anhydro-2,4-Methylene-5,6-Dimethyl-D-Sorbitol - G. E. Ustyuzhanin, N. S. Tikhomirova-Sidorova, and S. N. Danilov	445	453
Glycol Ethers and Their Derivatives. XLIX. Synthesis of γ -Bromo Ethers of Aromatic Series - Shamkhal Mamedov and D. N. Khydyrov	449	457
Chemistry of Selenophene. XLIII. Reaction of 2-Chloromethyl- and 2,5-Dimethyl-3-Chloromethylselenophene with Potassium Cyanide - Yu. K. Yur'ev and M. A. Gal'bershtam	454	462
Synthesis of Some New Hydroxyketones by the Hoesch Method - N. A. Rybakova and E. N. Zil'berman	458	466
Bis(β -Chloroethyl)Amines of Bicyclic Compounds. VI. 4- and 5-N-Bis(β -Chloroethyl)-Aminoindans - I. I. Kolodkina, K. V. Levshina, and S. I. Sergievskaya	461	469
Bisquaternary Ammonium Compounds of Some Derivatives of 1,6-Hexamethylenebisaminoacetic Acid - N. V. Khrromov-Borisov and K. A. Eremicheva	466	475
Azacyanines. III - A. I. Kiprianov and T. M. Verbovskaya	470	479
Rearrangement of Ester of Hydroxymethyl(Diethylphosphono)Acetic Acid - A. N. Pudovik, I. V. Konovalova, and L. V. Dedova	475	483
Investigations on Bisphenols. II. Condensation of Phenols with Ketones in Presence of Boron Fluoride - I. M. Biliuk, A. M. Serebryanyi, R. L. Globus, and V. G. Brudz'	476	487

(continued)

Available From CB

CONTENTS (continued)

	RUSS. PAGE	PAGE
Reactions of Nitroolefins with Aromatic Compounds in Presence of Acid Catalysts. II. Condensation of 1,1,1-Trichloro-3-Nitropropene-2 with Benzene in Presence of Aluminum Chloride - A. D. Grebenyuk, A. Ladanova, and I. P. Tsukervanik.....	482	490
The Alkylation of Aromatic Compounds by Alcohols. XVIII. Reactions of Pentanol-1 and Hexanol-1 with Benzene - G. Kh. Khaklinov and I. P. Tsukervanik	485	493
The Chemistry of Free Radicals of the Hydrazine Series. IX. Synthesis of α,α -Diphenyl- β -2,6-Dinitro-4-Carboxyphenylhydrazyl and α,α -Diphenyl- β -2,6-Dinitro-4- Bromophenylhydrazyl - R. O. Matevosyan and M. A. Ikrina.....	491	499
The Reciprocal Electron-Accepting Ability of Conjugated Aromatic Systems - I. I. Grandberg . Pyrazoles. XXXI. Infrared Spectra of 4-Acylpyrazoles, Their Salts, and Metallic Derivatives - V. G. Vinokurov, V. S. Troitskaya, N. D. Solokhina, and I. I. Grandberg	495	504
Pyrazoles. XXXII. Mobility of a Halogen in the Pyrazole Ring - I. I. Grandberg, L. I. Gorbacheva, and A. N. Kost.....	498	506
Pyrazoles. XXXIII. Oxidative Elimination of the Benzyl Group and Interaction of Grignard Reagent with Halopyrazoles - I. I. Grandberg, L. I. Gorbacheva, A. N. Kost, and D. V. Sibiryakova-Fedotova	503	511
Pyrazoles. XXXIV. Ultraviolet Spectra of Pyrazole Systems - I. I. Grandberg.....	508	518
Pyrazoles. XXXV. The Fluorescence of Pyrazoles under the Action of Ultraviolet Light - I. I. Grandberg, S. V. Tabak, and A. N. Kost	511	519
Pyrazoles. XXXVI. Chromatography of Pyrazoles in a Loose, Thin Bed of Alumina - A. N. Kost, G. K. Faizova, and I. I. Grandberg.....	517	525
Amino and Bthyleneimino Derivatives of 5-Fluoropyrimidine - L. D. Protzenko and Yu. I. Bogodist.....	525	533
The Mechanism of Oxidation of Diphenyl Sulfide by Caro's Acid - I. P. Gragerov and A. F. Levit	530	537
Isotopic Exchange of Iodo and Iodoso Compounds with H_2O^{18} - I. P. Gragerov and A. F. Levit ..	535	543
The Synthesis of γ -(2-Hydroxy-5-Alkylphenyl)Propylamines - A. N. Kost and B. M. Shaiman..	536	544
Esters of Monoarylidies of Phenylphosphonic Acids - I. N. Zhmurova	538	545
The Synthesis of 2-Phenylindole and Its 1-Methyl Derivative - N. I. Grineva, V. L. Sadovskaya, and V. N. Ufimtsev	542	549
Aryl Dichlorophosphoacyls and Their Derivatives - G. I. Derkach, V. A. Shokol, and E. S. Gubnitskaya	545	552
Dialyloxychloro- and Triaryloxyphosphoacyls - G. I. Derkach, E. S. Gubnitskaya, L. I. Samara, and V. A. Shokol	547	553
Diallyl Esters of Arylsulfonylamidophosphoric Acids - V. I. Shevchenko, V. P. Tkach, and A. V. Kirsanov.....	551	557
Amides of Aromatic Iminosulfonic Acids - E. S. Levchenko, E. S. Kozlov, and A. V. Kirsanov..	556	562
Some Transformations in Systems which Contain the Imidazole Ring. III. The Action of Bases on N-Methyl- N' -(2,4-Dinitrophenyl)Imidazolium Salts - A. M. Simonov, A. D. Gamovskii, Yu. N. Sheinker, B. I. Khrustich, and S. S. Trofimova.....	559	565
Some N-Derivatives of Benzamidine - D. F. Kutepov, A. A. Potashnik, and V. V. Sheluchenko .	566	571
The Preparation of Acids through Furan Derivatives. VII. The Synthesis of Benzoylasparagine and Benzoylisoasparagine - A. P. Terent'ev, R. A. Gracheva, and N. M. Mikhailova.....	572	579
The Synthesis of Diphenyl- and Terphenyldipyrrolinyls - E. E. Baroni and K. A. Kovyrzina, ..	574	581
Percylic Acid and Its Compounds as Catalysts in Organic Syntheses. IX. Synthesis of Ketones of the Pyrrole Series - G. N. Dorofeenko, A. P. Kucherenko, and N. V. Prokof'eva	577	583
Potential Antimetabolites. IV. Derivatives of Uracil-3-Acetic Acid - Yu. P. Shvachkin and M. T. Azarova	580	586
Studies in the Field of Alkanesulfonic Acids. XXVIII. The Halogenation of Alkanesulfonic- α -Aminopyridides - A. G. Kostsova	584	590
	588	595

(continued)

Available from CB

CONTENTS (continued)

	RUSS. PAGE	PAGE
Studies in the Field of Ceramidine Derivatives. I. Dehydration of 1,4-Diarylaminoanthra-quinones — N. I. Grineva, V. V. Puchkova, and V. N. Ufimtsev.....	590	597
Isomeric Transformations of Methyl(Chloronaphthyl)Sulfone — T. N. Gerasimova and V. A. Koptyug.....	594	601
Studies of Bromination with Dioxane Dibromide. III. The Effect of Substituents in the Ring and in the Hydroxyl Group of Phenol on Rate of Bromination — V. S. Karpinski.....	599	608
The Hydrolysis of Some Di(2-Chloroethyl)Amines. II — A. Ya. Berlin and A. D. Chinaeva	603	610
Studies in the Field of Sulfonilides. VII. Ethyl Esters of N-Arylsulfonyl-N-Phenylcarbamic Acids — L. P. Glushko, Z. F. Selenko, and M. S. Malinovskii.....	605	612
The Reactions of Trimethyl Silane and Its Analogs with Alkyl Halides — N. S. Vyzazkin, G. A. Razuvayev, and O. S. D'yachkovskaya	607	613
The Reaction of Acetone Cyanohydrin and Allyl Alcohol with Trialkoxystibines — E. K. Ignat'eva and B. V. Kuznetsov	611	617
Amides of β -Aryloxypropionic Acids — P. F. Butskus and N. V. Ragutene.....	615	622
Some Reactions of N,N -Di(β -Cyanethyl)- p -Toluenesulfamide — P. F. Butskus and R. Yu. Stonite	618	624
The Reactions of Crotononitrile and β -Dialkylaminobutyronitriles with Aromatic Amines — P. F. Butskus and G. I. Denis	622	629
The Reduction of Naphthalcarboxylic Acids. VIII. The Reductive Dimerization of Methyl Ester of 2,3- and 2,1-Naphthalcarboxylic Acids — N. M. Przhivalgovskaya, L. N. Lavrishcheva, G. T. Mondodoev, and V. N. Belov	625	632
The Reduction of Esters of 2,3-Naphthalcarboxylic Acid to Ester of 2,3-Tetralonecarboxylic Acid — N. M. Przhivalgovskaya, V. F. Shner, M. I. Mel'nikova, and V. N. Belov	628	635
The Saponification of Terephthalodinitrile by an Aqueous Solution of Ammonia under Pressure — I. A. Arkhipova, S. R. Rafikov, and B. V. Suvorov	631	637
The Synthesis of 1,4-Bis(Trimethylsilyl)Benzene — V. S. Nikitenkov	636	641
The Structure and Reactivity of Products of Condensation of Aromatic Amines with Aliphatic Aldehydes. I. Isomerism and Structure of Dimers of Ethyldene Aniline — V. I. Minkin and Zh. A. Tumakova	637	642
The Structure and Reactivity of Products of Condensation of Aromatic Amines with Aliphatic Aldehydes. II. Dipole Moments and Conformation of Bisethyldene Anilines — V. I. Minkin and M. I. Gorelov	641	647
Propargyl Esters of Arylsulfonic Acids and Some of Their Reactions — O. A. Prib and M. S. Malinovskii	647	653
Synthesis of N,N -Bis(2-Chloroethyl)Amino Derivatives of 1-(α -Nitro)Phenoxy-2,3-Epoxypropane — I. I. Chizhevskaya, L. I. Samuilenco, and L. I. Gapanovich	651	657
Investigations on the Naphthalene Series. XXVIII. Alkali Fusion of 2,2'-Dinaphthylsulfone Disulfonic Acids (5,5'- and 7,7'-Dihydroxy-2,2'-Dinaphthylsulfones; 2,2'-Dinaphthylsulfone-5-Hydroxy-5'-Sulfonic and 7-Hydroxy-7'-Sulfonic Acids) — V. V. Kozlov and G. S. Tubyanskaya	654	660
Investigations on the Naphthalene Series. XXIX. The Formation of Aromatic Disulfones — V. V. Kozlov, M. O. Iodko, A. L. Rudnik, and N. A. Kozlova	658	664
Condensation of Guaiacol with Unsaturated Alcohols in the Presence of Phosphoric Acid — A. I. Kakhnashvili, D. S. Pardzhikliya, and M. L. Kantariya	661	667
Thermal Decomposition of Benzoyl Peroxide in Phenylcyclohexane — G. A. Razuvayev and B. G. Zateev	668	673
Synthesis of Alkyl Derivatives of the Androstane Series. I. 2-Hydroxymethylene- 17α -Methyldihydrotestosterone and 2α , 17α -Dimethyldihydrotestosterone — L. N. Volovel'skii and G. V. Knorozova	670	676

(continued)

Available From CB

CONTENTS (continued)

	RUSS. PAGE	PAGE
Benz(c,d)Indoline Derivatives. VII. Synthesis and Reactions of 1-Arylamino-benz(c,d)-2-Indolinone - N. S. Dokunikhin and G. I. Bystritskii	673	680
An Investigation of Substances Forming Part of Essential Oils. VI. Hydration of Sabinene - G. A. Tolstikov, L. N. Lishvanova, and M. I. Gorynev	676	683
An Investigation of Alkaloids of the C ₁₅ Series. X. Hydrogenation of Aphyllidine and Aphyllidinic Acid - A. I. Ishbacy, A. S. Sadykov, and Kh. A. Aslanov	680	687
An Investigation of Alkaloids of the C ₁₅ Series. XI. Conversion of Aphyllinic Acid to Pachycarpine (d-Sparteine) - A. S. Sadykov, A. I. Ishbacy, Kh. A. Aslanov, and A. B. Mirzaabdullaev	682	689
Investigation of Alkaloids of <u>Securinegasuffruticosa</u> (Pall.) Rehd. - V. I. Murav'eva and A. D. Kuzovkov	685	693
A Triterpenic Acid (Meristotropic Acid) from <u>Glycyrrhiza triphylla</u> Fisch. et Mey - N. P. Kir'yakov and T. N. Naugol'naya	686	694
A New Triterpenic Acid (Macedonic Acid) from <u>Glycyrrhiza macedonica</u> Boiss. et Orph. - N. P. Kir'yakov and T. N. Naugol'naya	689	697
A Triterpenic Acid (Echinic Acid) from Roots of <u>Glycyrrhiza echinata</u> L. - N. P. Kir'yakov and T. N. Naugol'naya	692	700
LETTERS TO THE EDITOR		
The Reaction of the Cyclohexylamine Compound of 2-Formylcyclohexanone with Hydrogen Peroxide - L. P. Vinogradova and S. I. Zav'yakov	695	704
Synthesis of Some Ethoxysilanes and Dialoxanes with 3,3,3-Trifluoropropyl Groups - E. G. Kagan, A. I. Klebanskii, and A. V. Kharlamova	696	704
A New Sesquiterpene from Essential Oil of <u>Artemisia taurica</u> Willd. - G. V. Pigulevskii and V. I. Kovalev	698	705
Replacement of Chlorine Atoms of Trimeric Phosphonitrile Chloride by Morpholine - A. A. Kropacheva and L. E. Mukhina	699	706
Acetylene-Allyene-Acetylenic Rearrangements of Phosphites with a β,γ -Acetylene Linkage in the Ester Radical - A. N. Pudovik and I. M. Aladzheva	700	707
Acetylene-Allyene-Dione Rearrangements of Diphosphites with a β,γ -Acetylene Linkage in a Common Ester Radical - A. N. Pudovik and I. M. Aladzheva	702	708
Synthesis of Substituted Diserilylphosphates - S. M. Avaeva, M. M. Rotvinik and I. F. Syromyatnikova	703	709

Available From CB

JOURNAL OF APPLIED CHEMISTRY

OF THE USSR

A translation of (ZHURNAL PRIKLADNOI KHIMII)

a publication of the Academy of Sciences of the USSR

© 1963 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N. Y.

Volume 36, Number 2

February, 1963

CONTENTS

	P A G E
	ENG. RUSS.
Kinetics of Dissolution of the Glassy Germanium-Selenium System in Alkaline Solutions. Z. U. Borisova and Chin Cheng Ts'ai	221 233
Partial Equilibrium Pressures of HF, SiF ₄ , and H ₂ O over Aqueous Fluosilicic Acid Solutions. V. V. Illarionov, Z. G. Smirnova, and K. P. Knyazeva	235 237
Rate of Decomposition of Apatite by Nitric Acid Solutions of CaO-P ₂ O ₅ -Na ₂ O-H ₂ O System. M. E. Pozin, B. A. Kopylev, Wang Li-sheng, and G. I. Shishkin ..	229 242
Interaction of Aluminum Carbide with Magnesium Oxide. E. I. Khasanov, E. G. Safonova, S. A. Stakheeva, and G. V. Kuz'mina	238 251
Reduction of Certain Elements by an Oxidation-Reduction Polymer. A. V. Gordievskii and E. V. Renard	249 264
Theory of Crystallization of Thermoplastic Slips during Casting and Freezing Processes. P. P. Budnikov and N. V. Shishkov	267 272
Nitriding of Kaolin. K. S. Kutateladze and E. N. Zedginalidze	267 283
The Relative Role of Kinetic Factors in the Dynamics of Indine Adsorption from Aqueous Halide Solutions. I. M. Stoyanovskii and I. E. Ampilogov	271 287
Kinetic Equations for Calculating the Efficiency of Extraction Columns of the Sieve Plate Type. E. D. Vertuzeav and A. N. Planovskii	278 295
Kinetics of Interaction of Niobium Carbides and Oxides under Vacuum. G. P. Shveikin and V. D. Lyubimov	282 299
Investigation of the Mechanism of Mass Transfer between a Gas and a Liquid in a Vessel with Mechanical Stirring. M. Kh. Kishinevskii and A. S. Armash	289 308
Adsorption Kinetics in a Counter-Current Column with a Suspended Adsorbent Layer. V. Flokk, V. N. Lepilin, and P. G. Romankov	296 315
Critical Stirrer Speed for Mixing a Liquid-Liquid System. I. S. Pavlushenko and L. N. Braginskii	303 322
Calculation of the Activity Coefficients of Components in Liquid Alloys of a Sodium- Potassium-Lead Ternary System. A. G. Morachevskii	309 329

Available From CB

(Continued)

CONTENTS (continued)

ZHURNAL PRIKLADNOI KHIMII, Vol XXXVI, No 2, 1963.

	P A G E	ENG.	RUSS.
Separation of Trivalent Chromium from Bivalent Iron in Sulfuric Acid Solutions. D. P. Zosimovich, K. B. Kladnitskaya, and N. D. Ivanova.....	314	333	
A Study of the Anodic Oxidation of Aluminum-Copper Alloys in Sulfuric Acid. M. N. Tyukina, N. N. Ignatov, F. P. Zalivalov, and N. D. Tomashov	318	338	
The Electrodeposition of Small Quantities of Iron on Mercury. V. G. Prikhodchenko, V. A. Skripnik, and O. K. Kudra	324	344	
Cathodic Polarization during the Electrolytic Deposition of Lead-Tin Alloy. V. I. Lainer and Yu Tsu-Jan	329	350	
The Behavior of an Aluminum Anode in Galvanic Cells with an Alkaline Electrolyte. A. V. Kuz'mina and L. L. Kuz'min	335	356	
The Mechanism of the Retardation of Corrosion Cracking by Corrosion Inhibitors. N. I. Podobayev	341	362	
The Influence of the Structure of the Zinc Cathode on the Electrolytic Reduction of Acetone. V. G. Khomyakov and A. P. Tomilov	351	373	
The Influence of Electrolysis Conditions on the Reduction of Acetone at a Zinc Cathode. V. G. Khomyakov and A. P. Tomilov	357	378	
A Study of the Electrokinetic Properties of Viscose Cellulose with Respect to Solutions of Iron Compounds. S. S. Posin and V. I. Yur'ev	364	385	
Investigation of the Influence of Esters and Salts of Hydroxy- and Polyamines on the Precipitation Capacity and Corrosive Aggressiveness of Fuels Containing Cracking Components. V. N. Zrelov and V. M. Melekhin	368	389	
The Influence of the Nature of the M^+ Cations in MCl on the Catalytic Activity of $CuCl-MCl$ Solutions in the Dimerization of Vinylacetylene. I. M. Dolgopol'skii, A. L. Klebanskii, and Z. F. Dobler	374	394	
On the Internal Surface and Capillary Structure of Natural and Mercerized Cotton Cellulose. N. I. Klenkova and G. P. Ivashkin	378	398	
Water-Soluble Condensation Products from Acetone and Formaldehyde. N. I. Borodkina and S. S. Frolov	388	408	
Methods for Analysis of Carboxymethyl Cellulose Ethers. I. M. Timokhin and M. Z. Finkel'shtein	394	418	
Electrocracking of Sulfur-Containing Petroleum Fractions to Obtain Acetylene, Olefins, Hydrogen, Carbon-Black and Sulfur-Containing Products. A. D. Kokurin, V. D. Obrezkov, and D. A. Sibarov	401	424	
Formation of Cyclopentadiene during Production of Isoprene by Two-Stage Dihydrogenation of Isopentane. V. M. Sobolev, N. V. Shcherbakova, and V. S. Shmarin	405	428	
Investigation of the Influence of Conditions on the Synthesis of 1-Nitromethyl-1-cyclohexanol. G. V. Shemshurenko and V. I. Burmistrov	408	431	
Determination of the Dissociation Constants of Anthrahydroquinones in Nonaqueous Media. M. G. Romanova and V. G. Abozin	412	435	
The Acid-Base Properties of Leuco Compounds of Vat and Very Simple Dyes. M. G. Romanova and V. G. Abozin	417	441	
BRIEF COMMUNICATIONS			
An Investigation of Electroosmotic Movement of Highly Concentrated $LiCl$ Solutions. V. P. Konstantinov and V. P. Trosin	422	447	
Determination of the Kinetic Hydration Numbers of Li^+ Ions in Highly Concentrated $LiCl$ Solutions. B. P. Konstantinov and V. P. Trosin	424	449	
Chlorination of Titanium Dioxide by Aluminum Chloride in Fused Carnallite. A. B. Bezukladnikov	427	451	

Available from CB

CONTENTS (continued)

ZHURNAL PRIKLADNOI KHIMII, Vol XXXVI, No 2, 1963.

P A G E
ENG. | RUSS.

Acceleration of Extraction of Heavy Metal Ions from Industrial Effluent. L. D. Skrylev and S. G. Mokrushin.....	430	454
Catalytic Hydrogenation of Petroselinic Acid Oxide. G. V. Pigulevskii and A. E. Sokolova.....	432	455
Hydrogenation of the Phenol Resin Obtained during Manufacture of Diphenylol Propane. A. B. Vol' - Epshtain, B. R. Lifshits, and V. V. Surovtseva	434	456
Liquid-Vapor Equilibrium in the System Benzyl Alcohol-Toluene-Water. M. P. Sussarev and A. N. Gorbunov.....	437	459
Conversion of p-Phenyl Tolyl Methane on Aluminum Silicate Catalyst. A. F. Dobryanski and E. N. Bykov.....	440	461
Extraction of the γ -Isomer from Hexachlorocyclohexane by Coal Tars. G. M. Strongin, M. N. Kulinova, and M. I. Prokhorova.....	444	465
Preparation of Caprone- and AG Salt-Based Copolymers. Ya. A. Kharit, A. S. Shpital'nyi, and M. A. Sokolovskii.....	447	467

Available From CB

Soviet Physics

TECHNICAL PHYSICS

A Translation of the "Zhurnal Tekhnicheskoi Fiziki"

(Russian Original Vol. 33, No. 7, pp. 760-894, July, 1963)

Vol. 8, No. 7, pp. 581-672

January, 1964

CONTENTS

	RUSS. PAGE	PAGE
A Class of Nonlinear Solutions of the Collisionless Kinetic Equation, <u>F. M. Nekrasov</u> . . (T)	581	769
Convection of Weakly Ionized Plasma in a Nonuniform External Magnetic Field, <u>A. V. Timofeev</u> (T)	586	778
Viscosity Processes in Relativistic Magnetohydrodynamics, <u>G. M. Zaslavskii</u> and <u>S. S. Molotov</u> (T)	590	782
Characteristic Oscillations of a Plasma Ellipsoid in a Constant Magnetic Field, <u>Yu. A. Berezin</u> (T)	594	788
Theory of Motion of Charges in a Medium along the Axis of a Channel, <u>V. N. Tsytovich</u> (T/E)	599	795
Expression for Heat Flow in Relativistic Magnetohydrodynamics, <u>G. M. Zaslavskii</u> . . . (T)	603	801
The Stability of the Structure of a Shock-Wave Front Moving across a Magnetic Field in a Rarefied Plasma, <u>V. I. Karman and R. Z. Sagdeev</u> (T)	608	806
Theory of the Steady States of a High Temperature Plasma: Plasmoid with Longitudinal Magnetic Field, <u>E. F. Tkalich and V. S. Tkalich</u> (T)	612	815
Theory of Electrodynamic Acceleration of Plasma Bursts in a Coaxial System, <u>N. A. Khizhnyak and P. M. Kolesnikov</u> (T)	616	820
The Dissociation of Ions from Methane, Ammonia, and Water Due to Collisions with Molecules in the 3.5-100 keV Energy Range, <u>S. E. Kupriyanov</u> and <u>A. A. Petrov</u> (E/T)	618	823
Equalization of Longitudinal Electron Velocities in Modulated Beams, <u>A. T. Popov</u> . . (E)	626	832
Plasma Compression in a Magnetic Trap with Opposed Fields, <u>B. P. Kononov</u> (E)	628	835
Compression of an Annular High-Frequency Discharge by a Rising Magnetic Field, <u>M. D. Raizer</u> (E)	631	839
Some Problems in the Theory of the Boundary Layer of a Conducting Liquid, <u>K. E. Dzhugashvili</u> (T)	634	843
Four Quadrupole Lenses as an Analog of an Axially Symmetric System, <u>A. D. Dymnikov and S. Ya. Yavor</u> (T)	638	851
Investigation of the Effect of After-illumination on the Duration of Ultra-Short Light Flashes which Arise during a Spark Discharge, <u>S. I. Andreev and M. P. Vanyukov</u> (E)	644	850
Effect of Collisions on the Localization of Electrons in a High-Frequency Field, <u>Ya. M. Pinsky</u> (T)	648	864
The Possibility of Using Reference Points in the Pressure Scale, <u>Yu. S. Genshaft</u> . . . (T)	650	867
Effect of the Epielektrode Regions on the Electrical Resistance of a Weakly Ionized Plasma, <u>E. B. Sonin</u> (T)	654	872

(continued)

Available From Amer Inst Phys
Sov Phys-Tech Phys
Vol VIII, No 7

ZHURNAL TEKHNICHESKOI FIZIKI, Vol XXXIII, No 7, 1963.
CONTENTS (continued)

	RUSS. PAGE	PAGE
BRIEF COMMUNICATIONS		
Damping of Phase Oscillations Resulting from the Interaction of Particles with an Accelerated System. <u>A. I. Baryshev</u>	861	882
Electron Current at the Exit of a Penning-Type Tube. <u>Yu. E. Kreindel</u>	862	883
LETTERS TO THE EDITOR		
Propagation of Small Excitations in a Gas with Finite Conductivity in a Magnetic Field. <u>K. A. Lur'e</u>	864	886
Temperature Relaxation of Charged Particles in Plasma. <u>I. S. Baikov</u> and <u>R. R. Ramazashvili</u>	866	890
Method of Calculating the Parameters of a Grouping Device with $v_{ph} = \text{Const.}$ <u>A. I. Zykov</u> and <u>F. K. Ostrovskii</u>	868	892
Available From Amer Inst Phys Sov Phys-Tech Phys Vol VIII, No 7		

AUTHOR INDEX

* This index does not include authors listed in the cover-to-cover table of contents.

- A -	- B -	- C -	
Abakelya, M. S.	72	Astapovich, I. S.	73
Abizarov, Yu. Sh.	60	Aubertein, P.	68
Acs, Lajos	21	Auriol, A.	127
Addryenko, L.	46	Avramescu, Aurel	15
Adrian, Paul	114	Ayzenberg, M. A.	18
Afanas'ev, V. G.	61	Ayzerman, M. A.	82
Afanas'eva, V. I.	71	Azar'yev, D. I.	78
Agafonov, G.	73	Azhazha, E. G.	74
Akad'yevskiy, A. A.	52		
Akhlibininskiy, B. V.	130	Babayeva, V. P.	68
Akulichov, I.	49	Babics, Antal	65
Akulichhev, I. T.	50	Baboshina, N. A.	59
Akulichhev, Ye. V.	59	Babskiy, G. G.	50
Alekhin, N.	3	Babskiy, Ye. B.	50
Aleksanyan, V. T.	108	Badmaarag, R.	40
Alekseyev, A.	4	Baier, Othmar	111
Alekseyev, G. A.	13	Bailly, J.	81, 112
Alekseyeva, V. G.	127	Bakayev, O. O.	112
Alles, M.	98	Baldelli, B.	65
Alpar, Lazzlo	111	Balestic, F.	114
Al'pern, Daniil		Balitskaya, R. M.	57
Yevseyevich	51	Balkovets, D. S.	95
Alpert, Ya. A.	126	Barabash, Yu.	17
Amemiya, A.	124	Baranov, P.	4
Ananyan, A. A.	81, 82	Baratov, G. F.	17
Anan'yev, V. M.	50	Barbieri, D.	66
Andreyev, B. A.	71, 73	Barenblatt, G. I.	115
Andreyev, S. V.	62	Barinova, Z. B.	108
Andricux, C.	114	Barkovskiy, V. I.	60
Andronov, A. A.	108	Barnes, A. C.	90
Anna, II.	86	Barragan, Javier	
Annenkov, I. P.	60	Tercero	66
Antonenko, V. S.	12	Barthe, J. P.	116, 117, 118
Anzani, A.	119	Bartonicek, Robert	96
Aoki, Shigeo	105	Bassi, A.	104
Aoyama, Y.	105	Batishchev, I.	1
Apine, S. O.	51	Batkayev, R.	10
Arifdzhany, K. A.	59	Batrakov, Yu. V.	72
Arizan, Dan	114	Batyrov, Sh. B.	132
Arkhipov, A. S.	55	Bauermeister, A.	64
Arloing, F.	64	Bauermeister, Armin	65
Arnold, K.	76, 77, 133	Baulin, I.	13
Arsic, Draginja	23	Baumgartner, F.	70
Artsimovich, L. A.	112	Baumier, J.	79
Asada, Ch.	105	Baur, Emil	69
Asatsuma, A.	124	Bayevskiy, R. M.	53
Ashimbayev, T.	8	Be, Chan Hung	40
Asmu	36	Becker, Aharon	33

Becker, K.	118	Borovskiy, I. V.	95
Begliomini, A.	65	Bosch, Robert	89
Behrens, K.	87, 100	Boussard, R.	84
Bolan, G.	4	Braams, R.	118
Belashchenko, D. K.	93	Bradley, J.E.S.	90
Belenky, S. Z.	127	Brandi, H. T.	87
Bel'kevich, V. I.	126	Branovys'ka, S. V.	112
Belkin, V.	13	Brauer, H.	85
Bellion, B.	119	Braumer, J.	85
Belopol'skaya, A. R.	132	Brautti, Giulio	119
Belous, A. L.	126	Bredel, V. V.	112
Belov, A. F.	126	Breitmoser, W.	88
Belov, K. P.	132	Brisbois, J.	116, 117
Belyakin, N. V.	54	Brisi, Cesare	104
Belyayev, A.	4	Bronfin, M. B.	90
Benco, A.	119	Brun, E.	103
Bonnewitz, K.	129	Brun, Monique	113
Benvenuto, Giorgio	30	Bruns, F. W.	25
Berettyan, Laszlo	21	Bruzz, B.	129
Berezin, V. M.	109	Buchi, G.	119
Berdzhe, R.	14	Bugardt, Karl	128
Berkengeym, G. B.	53	Buhler, H.	88
Borlin, A. A.	67	Buhler, H. E.	85
Bernst, R.	102	Bulos, Abdol' Malek	
Besemar, K.	86	Butros	61
Beyeler, M.	98	Bunge, P.	88
Bezdenozhhiy, I. S.	49	Bunjiro, Koto	89
Biborgal, A. V.	113	Bur, R.	98
Bingo, K.	120	Bursa, Milan	76
Biryuzova, V. I.	51	Burtman, V. S.	74
Bioco, T.	125	Buscarlet, L.	114
Blagovidov, I. F.	67	Buss	89
Blanchard, R.	68	Buss, E. K.	88
Blyankman, Ya.	46	Bussac, J.	84
Blyum, Aleksander	67	Butenko, Lev	
Bohrovic, Silvestar	25	Alekseyevich	49
Bocharov, D. A.	61	Butovetsky, L. D.	59
Boersch, H.	129	Buznikov, G. A.	55
Bogorad, D.	5	Bykova, M. S.	73
Bogorov, V. G.	74	Byutner, E. K.	73
Bokshteyn, S. Z.	90		
Bolkhovitinov, Viktor Fedorovich	18		
Bolotov, V. B.	50	- C -	
Boltinskiy, V. N.	7	Caizergues, R.	117
Boltzmann, L.	128	Calais, D.	98
Bonchev, E.	75	Camona, G.	104
Borisovich, Ye. S.	75	Carane, G.	99
Borisov, I.	8	Cassinis, Gino	76
Borisov, P.	6	Castex, H. Laborde	110
Borisova, O. F.	54	Cesselin, P.	99
Born, H. J.	129	Chadayev, Ya.	8
Borodulina, M. K.	132	Chakalev, A. A.	92
Borokhovich, A.	3	Chalfin, L. L.	70
Borovaya, M. S.	67	Chalov, R.	10
		Champeix, L.	97

Chang, C.	120	Dokhtyar, D.	10
Chang, Ts'ung-hsien	57	Delayre, R.	81, 112
Chedaille, J.	99	Delone, N. L.	53
Chojfez, M. E.	70	Deneen, F. S.	99
Chekin, V. Ya.	58	Denezhkin, P.	6
Chokmarova, K. I.	91	Denis, E.	85
Ch'eng, Hung	48	Denisov, V. G.	45
Cheng, Yi-ch'ing	41	Denizkin, N. A.	71
Cheptsova, M.	2	Detroz, P.	84
Chorepanova, L.	13	Devillers, C.	117
Chernikov, S. P.	13	Dickens, P.	100, 103
Chernov, V. N.	58	Didkovskiy, V. P.	92
Chi, Wen-shih	96	Diko, N. D.	132
Chiang, Chung-hung	96	Dimitrov, Ivan	20
Chicharov, A.	7	Ding, Shia-shi	110
Chichvarina, N. A.	130	Djurovic, Radomir	24
Chiritt, A.	23	Dmitriyeva, I.	62
Chistovich, L. A.	62	Dmokhovskiy, V.	49
Cho, Chaeon	36	Dobratz, B.	99
Choe	36	Dobretsov, L. N.	78
Choe, Chang Hak	36	Dobrovolskiy, V. P.	81, 82
Chong, Byong-sik	36	Dobrusin, R. I.	109
Chou, T'ing-ju	48	Dogadkin, B. A.	67
Chudakova, I. V.	55	Dolukhanov, M. P.	78
Chudinovskaya, G. A.	63	Dolver, E. K.	78
Chudova, Z. I.	59	Domannivskiy, L. N.	64
Chumakova, R. I.	56	Domshlak, M.	49
Cirilli, Vittorio	104	Donets, E. D.	112
Cizeron, G.	118	Dor, Ami	33
Clauzon, P.	84	Douessin, Paul	45
Cockelbergs, R.	113	Dovortseva, E. I.	56
Collee, Robert	116	Dragavtsev, V. A.	56
Conzett, R.	111	Dragut, A.	114
Coquema, C.	115	Drayzmer, L. P.	130
Coulomb, R.	115	Drevush, V. P.	58
Crevecoeur, E. H.	115	Drozdovskiy, S. S.	78
Cuinat, R.	27	Dru, Joan	28
Cullity, B. D.	93	Duben, L.	96
Czech, K.	100	Dubinin, G. N.	94
		Dubinin, N. P.	51
		Duchateau, R.	98
Dachraoui, Farhat	32	Dumitrescu, D.	134
Dagba, N.	39	Dunn, W. C.	99
Danilov, Yu. S.	95	Durup, J.	113
Daszkiewicz-Kuthan, Maria	35, 73	Durup, M.	113
Dateyama, S.	105	Duval, C.	68
Davydov, G.	7	Duytseva, M. A.	75
Davydov, Yu. P.	92	D'yakov, Guseva	34
de Forcrand, R.	98	D'yakov, Iv.	20
de Graaf, J. E.	97	Dzhunusov, M. S.	61
de Klerk, D.	27	Dzhurov, Dobri	24
Decker, A.	99	Dzrbasjan, M. M.	108
Decraene, Philippe	32		

- D -

- E -

Eastman, D. R.	127
Eder, F. X.	129
Efimov, E. A.	78
Eisenlohr, H.	119
Elentukh, I.	10
El'piner, I. Ye.	52
Endo, Riuchi	75
Engel, H. J.	69
Engshuber, M.	101
Enomoto, S.	120, 121
Eradze, D. G.	14
Eregdondagba, D.	37
Erenpreys, Ya. G.	52
Ermischer, W.	118
Erusalimchik, I. G.	78
Eskilsson, E.	32
Esposito, M.	89
Evreinov, M. G.	78

- F -

Faddeyev, L. D.	109
Fan', Gun-fan	68
Fang, Fang	41
Farber, G. Kh.	83
Fautrel, M.	64
Fedinin, V.	8
Fedorenko, V. N.	6
Fedorov, N. F.	1
Fedorovich, M.	6
Fedoseyev, P. F.	16
Fedynskiy, V. V.	73
Fegerl, S.	87
Felszerfalvi, Janos	129
Fernau, Albert	118
Fialkov, A. S.	19
Figurelli, Michele	30
Filatova, I. T.	54
Filimonov, D.	9
Fischbein, E.	26
Fischer, W. A.	85
Fishkova, L. M.	72
Fitilev, B. V.	95
Fleischer, H. J.	85
Flerov, G. N.	112
Fogy, W.	86
Fokon, E.	9
Fomin, N. A.	45
Forch, K.	103
Franck, U. F.	88
Frank, Pierre	44
Franko, V. A.	50
Frenk, I. Kh.	108

Friedel, J.	98
Friedling, G.	79
Fritzsche, Hartmut	68
Frolov, A. D.	82
Frolov, N.	131
Frolov, Yu.	57
Frumkin, A. N.	126
Furanski, N. A.	14
Fujii, Hiroshi	104
Funk, V. F.	94
Funtikov, B. A.	55
Furtak, Robert K.	43
Furtunescu, H.	22
Furuhashi, Akira	120

- G -

Gabayeva, N. S.	55
Gaier, H.	79
Galilei, Galileo	133
Gallot, C.	98
Galmiche, P.	99
Galonskiy, P. P.	7
Galushko, P. Ya.	72
Gankin, V. B.	94
Ganno, S.	121
Garaudy, Roger	38
Gargasas, P.	6
Garin, M.	5
Garza, F. T. Cantu	66
Gaussens, J.	84
Gauthron, M.	90
Gautier, R.	118
Gavrilova, N. A.	50
Gavrilov, N. V.	53
Gavrilov, V.	16
Gel'fand, I. M.	131
Gellert, I. V.	2
Genesi, M.	66
Geoffroy, R.	85
Gerasimov, N. V.	7
Gernik, V.	58
Getsov, L. V.	96
Gevorkyan, S.	9
Giesler, Henry	103
Gill', G. V.	107
Gilbo'a, Moshe A.	32
Gindis, A. P.	83
Ginzburg, A. S.	54
Girard, Y.	112
Glazunov, V. V.	55
Glushko, B. A.	60
Glushkov, V. M.	132
Gogoheridze, A.	8
Gogunskiy, G. G.	12

Gol'dberg, A. A.	107	Hiki, S.	66
Gol'dberg, Ye. D.	51	Hikichi, K.	124
Gol'dfarb, L.	57	Hilbert, Fritz	127
Goldschmidt, Th. A.G.	64	Hirayama, T.	123
Golopetrov, I.	8	Hisakatsu, Yabe	41
Golovchenko, F.	4	Hisano, Shigeo	79
Golynskiy, M.	8	Hivert, A.	99
Gorelov, Ya.	14	Hochreutiner, R.	27
Gosselain, P.	113	Hofert, M.	128
Goulet, C.	97	Hoppe, J.	86
Griese, F. W.	87	Hori, R.	121
Griesser, Gerd	65	Horstmann, D.	102
Grigoriyev, G. A.	93	Hot, M.	97
Grigorovich, B. M.	115	Hrbek, A.	96
Grochulski, Janusz	35	Hua, Loo-keng	110
Grubitsch, Heribert	69	Huss, H.	85
Gruson, G.	83	Huu, Tho	38
Gubarev, M. I.	12	Hwang, Byong-ok	36
Gubert, S. V.	95	Hye, H.	87
Gulyy, M. F.	49	Hyon, Chol-kyu	36
Gurevich, S. M.	92		
Gurlich, W.	86		
Gusel'nikov, A. A.	127		
Gvozdev, B. A.	112		
Gyurdzhyan, A. A.	54		
		- I -	
		Iandelli, Aldo	104
Ha, Ke Tan	38	Ichio, Yokoyama	36
Haaalck, H.	76	Idris, G. M.	71
Haber, Fritz	77	Ignatovskiy, F.	48
Habrakon, L.	99	Iida, S.	124, 125
Haefner, H.	129	Ikegami, Ryo	120
Haegi, W.	104	Ikegami, Hidetsugu	119
Hakamada, K.	125	Iliescu, Onoriu	66
Hansen, M.	87	Iliev, Spirodon	20
Hanus, F.	25	Il'yushenko, A.	14
Harasawa, Shiro	104	Imamura, H.	120, 123
Harms, F.	102	Imamura, Rikizo	119
Hartel, S.	101	Icanid, G.	114
Hasbadzhar, Sh.	48	Ionescu, Nicolae	23
Hasegawa, M.	105	Iordanskaya, L. N.	109
Havinson, S. Ja.	109	Ischebeck, P.	87
Hayakawa, K.	124	Iskhakov, S. I.	19
Hayashi, K.	121	Ivannikova, R. V.	53
Helmy, Rafaat	85	Ivanov, B. V.	130
Hempel, M.	102	Ivanov, G.	8
Henkel, O.	101	Ivanov, N.	13
Henze, Carl G.	44	Ivanovic, Milovan	48
Herfurth, K.	101	Ivasik, V. M.	62
Herrmann, E.	88	Ivlev, V. S.	63
Herziger, G.	129	Izmaylov, N. A.	125
Hess, W.	103		
Heumann, T.	103		
Heynert, G.	87		

- J -

Jaaskelainen, M.	27
Jacoby, G.	100
Jagbaral, N.	37
Jager, Gyula	21
Janos, Timar	21
Janoushek, Jaroslav	69
Jansen, N.	100
Jdanov, D. A.	64
Jeanpierre, G.	84
Jeget, P.	85
Jeglitsch, S.	129
Jeschar, R.	85
Jessen, Otto	77
John, H.	86
Jung, Karal	77
Just, E.	86

- K -

Kabayshi, M.	121
Kadonaga, M.	124
Kafarov, A.	1
Kafarov, V.	131
Kaganov, L. N.	95
Kagner, Ya.	47
Kahulits, Laszlo	20
Kalinin, Yu. D.	71, 126
Kamada, K.	121
Kambara, T.	122
Kan, Fu-hsi	96
Kan, S. N.	126
Kania, A.	84
Kantorer, S.	15
Kapel'chik, M.	14
Kapelrud, Arvid S.	31
Kaper, H. G.	110, 116, 117
Kapitanchuk, V. A.	134
Kaplan, I.	14
Karandayeva, V. P.	62
Karapetyan, L.	16
Karapetyan, M. K.	51
Karpman, V. L.	50
Karyagina, Z. V.	72
Katayama, Shunnosuke	104
Katsarov, P.	20
Kawabata, M.	105, 106
Kawai, Teikichi	104
Kawamura, H.	105
Kayrov, E. A.	59
Kazakov, I. F.	60
Kazakov, N. F.	92
Kazakov, P.	2
Kazanli, D. N.	73
Kazumi, Kawamura	48
Keienburg, F.	65
Keirim-Markus, I. B.	45
Kelle, V. Zh.	132
Kerjean, J.	98
Kerkis, Yu. Ya.	54
Kerner, Immo O.	111
Kharif	83
Khenokh, M. A.	52
Khil'ko, A.	9
Khitrin, L. N.	81
Khlebnikov, V.	14
Khol, Frantisek	101
Kholodovskiy, G. E.	82
Khomenyuk, Yu. B.	126
Khorev, A. I.	95
Khralenko, N. I.	130
Khromchenko, O. M.	58
Khrushchev, V.	49
Khubilarov, V.	10
Khuiamkhanov, V. Kh.	67
Kiknadze, I. I.	54
Kim, M. V.	83
Kindelan, J. M.	99
Kiril'yuk, Yu. I.	74
Kirpichnikov, L.	83
Kirschning, H. J.	87
Kisel', I. I.	91
Kisclev, L. L.	54
Kitayenko, L. G.	70
Kitayeva, O. N.	63
Klanfer, J.	127
Klare, Hermann	133
Klass, Yu. A.	62
Klocek, Franciszek	21
Kmiotek, E.	97
Knodratyeva, Ye. N.	57
Ko, Chih-ta	35
Ko, Sang-hup	36
Kobayashi, A.	123
Kobayashi, F.	120
Kobayashi, M.	121, 123
Kobayashi, S.	123
Koblents-Mishke, A. I.	50
Kochendorfer, A.	103
Kocherezhkin, V.	56
Kochetkova, A. V.	53
Kodrau, O. D.	74
Kohler, K.	86
Koizumi, K.	122
Kolenda, B. G.	90
Kolmogorov, A. N.	25, 111
Kolotyrkin, Ya.	5

Kolpakova, N. P.	81	Kuovo, Olavi	97
Komuro, N.	105	Kupfer, G.	128
Kondrat'yev, A. I.	93	Kushev, V. G.	94
Konieczny, Jerzy R.	46	Kushner, Kh. F.	59
Konig, P.	100	Kutaytsov, V. I.	90
Konin, P. M.	50	Kuzinski, Stanislaw	22
Konobayevskiy, S. T.	90	Kuzmak, G. E.	110
Konson, A.	8	Kuz'minskiy, A. S.	113
Konstantinov, A. R.	3, 74	Kuznetsov, A.	11
Kootz, T.	100	Kuznetsov, M. I.	53
Kopnin, Yu. M.	110	Kuznetsov, O.	13
Koren'kov, D.	4	Kuznetsov, S. I.	67
Korobkov, A.	49	Kuznetsov, V. A.	115
Korolev, A. A.	83	Kuznetsov, Ya.	6
Korolev, V.	10	Kvasha, L. G.	74
Korolev, V. M.	90	Kvasnikov, A. V.	82
Koropov, V. M.	60		
Korotkov, V. N.	14	- I. -	
Korsunsky, M.	126		
Kortmulder, R. A.	101	Labuntsov, D. A.	83
Korzhenko, V. P.	54	Lavutin, G.	1
Koton, N.	4	Laconbe, P.	127
Kotova, N. I.	59	Lafuma, J.	115
Kovalenko, Ya. R.	61	Lalobret, Rafael Sanchez	42
Kovalev, L.	8	Laletin, A.	13
Kovaliev, V.	8	Lalov, Dimitur	20
Kovalev, Ye. Ye.	45	Lamberg, Robert F.	24
Koval'skaya	6	Lamherieux, J.	117
Koval'skaya, L. P.	47	Lambin, I. N.	91
Koval'zon, M. Ya.	132	Lamer, Stjepan	23
Kovarskiy, A. E.	47	Landin, Sven	30
Kovshulya, A. A.	7	Lang, F. M.	98
Kovtunenko, G. A.	91	Lapshin, N.	8
Kozlov, N.	4	Larina, Z.	7
Kozlovskiy, G. A.	60	Larionov, L. I.	11
Kozmanova, A. A.	107	Larzilliere, H.	31
Koznevnikov, V. A.	50	Lauer, K. H.	100
Kramer, Lothar	79	Lavrent'yev, M.	107
Krasnov, A.	10	Lazitch, Branko	16, 28, 38
Krempl, E.	86	Lean, J. B.	99
Krichevskiy, I.	3	Lebedev, E. M.	74
Kripskiy, A. M.	91	Lebedev, V. V.	78
Krisement, O.	69, 100	Lebedeva, V. V.	55
Krishtal, M. A.	93	Le Berre, F.	110, 116
Kriss, A. Ye.	18	Leksin, V. N.	95
Kroneis, M.	88	Lemogne, A.	127
Krotov, V.	5	Leonov, A. K.	72
Krylov, V. I.	107	Leontovic, E. A.	108
Kubantsev, B. S.	64	Lerer, L.	10
Kueppermann, W.	64, 65	Leshchinskiy, N. I.	113
Kuhukalo, I. A.	15	Levadnaya, G. D.	56
Kulik, V. T.	132	Leveque, P.	113
Kulikov	81	Levi, M. I.	62
Kuntscher, W.	102	Levin, B. Ja.	109

Levitov, N. D.	18
Levykin, N. N.	7
Leybzon, B.	16
Li, Shao-chzhun	68
Libertini, Lucio	29
Liesegang, W.	87
Lindner, Werner	20
Lipgart, A. A.	12
Lipovskiy, D. Yo.	126
Lipskaya, N. V.	71
Liu, Chen-chung	35
Liu, Cheng-tsung	63
Livshits, V. N.	50
Lodygin, N.	2
Logatkin, M. N.	62
Logvinova, V. V.	54
Loison, R.	98
Lomakin, N.	16
Lomako, P. F.	1
Longo, Luigi	30
Lopatin, R. N.	45
Losfeld, Andre	30
Lott, M.	116
Lozovoy, V. I.	12
Lukin, A. M.	60
Lukin, V. V.	14
Lukman, M. H.	39
Lur'ye, A. S.	132
L'vov, N. P.	56
Lyubchenko, N.	10
Lyustikh, Ye. N.	73

- M -

Ma, Chia-shan	35	Migirenko, G. S.	130
Maatz, R.	64	Mihaita, Mihai	22
Maatz, Richard	65	Mikhalevich, P. F.	91
Maerkor, R.	110	Mikhaylovskiy, Ya.	9
Magat, M.	114	Mikhlyukov, Ye. I.	91
Magnier, P.	98	Mikhzlyov, Dobri	20
Magnetskiy, V. A.	73	Mikulski, J.	118
Maj, S.	106	Mil'ko, Ye. S.	58
Makarov, E. F.	106	Millot, J. P.	97, 116
Makkaveyev, N.	10	Mil'ner, B.	2
Maksimov, R. I.	127	Minkevich, A. N.	67
Maksumov, A.	47	Mirnov, S. V.	112, 115
Maksumov, D. N.	19	Mironov, V. D.	78
Malakhova, R. P.	63	Mirozoyevu, V. A.	56
Mulcor, H.	102	Mishin, V. M.	71
Malek, G.	64	Mishustin, Ye. N.	56
Malek, Giorgio	66	Miterov, G. A.	19
Malicki, Michal	21	Mitin, M. B.	132
Malikova, E. M.	51, 59	Mitrega, Jan	22
Mal'kov, N.	7	Mitsche, R.	129
Malkova, Eva Silinkova	66	Miura, M.	121
Malunowicz, Edward	21	Miura, S.	122
Mandarov, I. I.	59	Miyanaga, I.	120
Mando l'shtam, S. L.	127	Mochizuki, Hiroji	120
Manent, G.	97	Moiseyev, V. N.	95
Mansurov, S. M.	71	Mojziskova, E.	64
Markaryan, Kh.	3	Molchanov, A.	2
Martens, V. K.	62	Momm, G.	88
Martin, Charles-Noel	76	Mommertz, K. H.	103
Martin, O.	102	Momot, A. G.	62
Martynovskiy, V.	3	Montarnal, Roger	113
Maruya, Kazuo	104, 105	Moreau, C.	68, 118
Mashkovskiy, M.	49	Mori, H.	123
Maslov, N.	5	Morillon, Jean-Pierre	28
Maslov, V. N.	95	Moritz, H.	111
Mateescu, Ion	66	Moriya, T.	120
Matsuda, T.	122, 124	Moskalev, Yu. I.	57, 114
Matsuo, H.	124	Motylanskaya, R.	49
Matyashkin, A. M.	62	Mourges, A.	97
Mauro, R.	128	Mouturat, P.	99
Mavrodjadi, V. G.	50	Mushle, H.	25
Medvedev, V.	18	Muhirad, W.	87
Medved, L. I.	51	Mukhlonov, I.	131
Medzhiboshskiy, M. Ya.	93	Mukhovatov, V. S.	115
Mejzlik, Jiri	68	Muller, G.L.J.	119
Menchinov, G.	5	Muller, H.	86
Menitskiy, D. N.	50	Muller, H. W.	127
Mercier, A.	99	Murashov, S.	16
Meter, I. D.	57	Murgu, N.	22
Meyer, K.	103	Muroi, Wataru	75
Neyerson, G. A.	90	Murray, Raymond L.	120
Neyman, N. N.	109	Musafir	32
Meymieux, R.	127	Muscan, Catinca	112
		Musifulin, A.	5
		Musin, A. M.	78

Mustelier, J. P.	118	Ohno, A.	123
Myadagmas, A.	40	Okada, M.	121
Myasnikov, Z. M.	14	Okhoshin, L. I.	14
Myskis, A. D.	107	Oleinik, O. A.	109
- N -		Ol'khovskiy, I. A.	94
Nabotova, L. V.	95	Olli, A. I.	18
Nagasaki, K.	105	Onn, Zeev	33
Nakai, Y.	121	Ono, H.	120
Nakamura, H.	123	Onoda, I.	105
Nakashio, S.	121	Oparenko, I.	6
Nakazumi, Johshu	70	Oppenheim, R.	100
Napalkov, A. V.	130	Oranskiy, I. Ye.	58
Natini, R.	89	Orlovskiy, E. S.	131
Naudet, R.	84	Osipenko, Ts. D.	108
Navakatikyan, A. O.	55	Osnitskaya, L. K.	57
Navara, E.	96	Ostrovskiy, I. V.	109
Nazarov, V.	46	Ott, H.	129
Nazarova, T. F.	51	Ou-yang, Chueh-ya	41
Nekrasova, S.	73	Ovezov, B.	13
Nelepo, B. A.	74, 75	Ozaki, Hiroshi	77
- P -			
Nemec, L.	68	Paffrath, H. W.	129
Nenni	29	Pajetta, Giuliano	30
Nevskaya, G.	49	Pakov, N.	6
Ngo, Thuc	37	Pal'min, V. V.	67
Nguyen, Van Loc	37	Papkovich, P. P.	12
Nguyen, Van Ngu	37	Parchevskiy, V. P.	55
Nikitin, D.	8	Paschal, R.	84
Nikitin, V.	19	Pashchenko, N. A.	108
Nikitina, D. G.	83	Pashchenko, T.	4
Nikitina, T. S.	113	Patary, J.	84
Nikolayev, G. A.	132	Patko, Jozsef	129
Nishida, Shozo	41	Paton, Ye. O.	92
Nishiyama, Tetsuo	89	Pauli, Wolfgang	118
Misnevich, L. B.	108	Pawelski, O.	88
Njoto	39	Ped', D. A.	75
Nockemann, P. F.	65	Peix, J.	118
Noda, Inakichi	70	Pepin, P.	97, 116
Nomokonov, L. I.	56	Pepperhoff, W.	85
Novik, I.	130, 131	Perczel, Karoly	21
Novikov, D.	3	Perlin, F. Kh.	72
Novikov, V. I.	45	Perret, A.	69
Novikov, Yu.	49	Peters, R.	102
Novoselov, Ye.	2	Petrona, Franco	30
Nurgel'dyev, O. N.	63	Petrov, R. V.	53
Nuzhdin, N. I.	56	Petrovic, Milan	24, 48
Nyamsanjaa, D.	36	Petrucchioli, Claudio	17
- O -		Pfleger, Josef	27
Occhetto, Achille	30	Pham, Dinh Tan	37
Ogryzkov, S. E.	60	Pham, Van	40
Ogura, Yudzuru	48	Phan, Quan	40
		Philippot, J.	118

Pichat, L.	97	Radlinskiy, A.	23
Pichler, H.	100	Radonjic, Milan	26
Pickler, W.	100	Radu, N.	26
Pinayev, G. P.	52	Radiyevskiy, V. V.	71
Pinsky, F. Ya.	59	Rafal'ski, V.	113
Pisarski, Grzegorz	22	Rahmanov, B. N.	107
Piskotin, M.	16	Rakovskiy, M.	3
Plateau, J.	99	Randerath, Kurt	69
Plaude, K. K.	132	Rassmann, G.	101
Plyatskovskiy, O. A.	95	Restoin, J.	116
Pogodin, K.	4	Ratgauz, M.	47
Pogonyalo, M. G.	60	Ratts, E.	11
Pokrovskiy, G. V.	92	Raykova, Ye. V.	54
Polak, L. S.	114	Razin, V. D.	2
Polikanov, S. M.	112	Renders, P.	97
Polyanskiy, Yu. N.	61	Repin, Yu. D.	94
Pomazkov, K. D.	9	Reshetnikov, Yu. S.	63
Ponomarev, Ye. A.	71	Revut, I.	4
Popel', S. I.	93	Revin, I. I.	108
Popiaukhin, S.	58	Rieck, H.	128
Popiaukhin, S. G.	60	Riehl, N.	129
Popov, N.	47	Rimskaya-Korskova, T. V.	1
Popov, N. I.	74	Ritov, Y.	33
Popovic, Miloje	23	Robens, R.	128
Popovich, P. R.	55	Rochet, Waldeck	28
Popovici, N.	22	Rodriguez, Antonio	40
Potebnya, Yu. M.	93	Rodyonov, K. P.	92
Poyarkova, A. D.	67	Rogov, A. D.	11
Pravdina, K. I.	52	Rogovin, D. A.	11
Pravetskiy, V. N.	53	Roldugin, I.	9
Preisendanz, Hans	128	Romanchenko, A.	46
Presman, A. S.	59	Romani, Roberto	30
Pribil'skiy, M. P.	17	Romankov, P.	131
Prodan, M.	6	Romanov, V. A.	18
Proshunin, P. N.	12	Ronkin, L. I.	107
Puig, J. R.	114, 117	Roschenblech, B.	88
Pukalov, B. P.	47	Roubitschek, Walter	26
Pukhov, H. Ye.	112	Roustant, Maurice	30
Purebjab, Ch.	42	Rozentsveig, V. Yu.	108
Putrya, A.	2	Ruhanov, Z.	14
Pyatetskiy-Shapiro, I. I.	131	Rubin, A. B.	57
- Q -			
Qotler, Yair	33	Rublev, Ya. A.	95
- R -			
Rabikobiche, A. M.	67	Rubtsov, M. V.	57
Rabinovich, M. Kh.	92	Rudintskiy, K.	73
Raczynski, B.	106	Rudnev, O. V.	126
Radeker, Wilhem	70	Rummel, R.	101
Radkevich, V. V.	91	Rumyantsev, G. I.	52
		Rusin, A. D.	82
		Ruzicka, O.	97
		Rybakov, I. M.	91
		Rybkin, Yu. F.	125
		Rybnikov, S. I.	81

Saarento, Heikki	28	Severtsov, A. N.	54
Sagalovich, N. M.	108	Shadur, L. A.	14
Saito, Toshio	104	Shakhparanov, M. I.	127
Sakai, Mitsuo	119	Shalumovich, V. N.	55
Sakai, S.	123	Shamel'khanov, A.	94
Sakurada, I.	124	Shamir, Ami	35
Salah, al'Amiri	83	Shaposhnikov, L. V.	63
Salesse, M.	84, 90	Shapovalenko, S. G.	131
Salikhov, A. G.	72	Sharay, V. N.	91
Samarin, A. M.	93	Sharefkin, D.	97
Samsonov, G. V.	94	Shatunov, G.	45
Sandstode, G.	128	Shcheglov, Ye.	5
Sannier, J.	97, 117	Shchegolev, V. A.	112
Santos, Barvena Azura	40	Shechepot'yev, N. V.	64
Sasaki, M.	89	Shcherbakov, N. M.	50
Sassano, Fidia	30	Shealtiel, Myriam Vallee	114
Savitskiy, Ye. M.	90	Shebanov, F. V.	58
Savkin, P.	3	Shebyakov, A. A.	81
Sazonov, V.	11	Shelest, P.	3
Schatzman, E.	76	Shelest, P. Ye.	47
Schayeff, O. A.	115	Sheruda, S. D.	12
Scheibe, H.	118	Shibata, N.	122
Scheidig, K.	83	Shibayama, Kyoichi	119
Schenck, H.	69	Shih, Tung-hsiang	16
Schienemann, R.	79	Shimanskaya, N. S.	116
Schilling, Hans	65	Shimbun, Yomiuri	77
Schmidt, K. H.	85	Shinoda, S.	106
Schmidt, W.	129	Shinohara, K.	123
Schoer, H.	100	Shirmer, V.	3
Schuhfried, F.	79	Shirmir, V.	4
Schulten, D.	86	Shishkova, A. P.	92
Schulz, H. P.	87	Shlain, Ye.	6
Schulze, W.	70	Shneyerson, B. L.	71
Schumann, H.	103	Shreykin, V. V.	94
Schwamm	89	Shteyngauz, Y. O.	1
Schwarz, E.	117	Shu, Chih-yeh	79
Schwarz, Leopold	28	Shuichi, Ikari	133
Schweer, W.	87	Shumauskas, M.	47
Schwenzfeier, W.	88	Shuvalov, L. A.	152
Schwerdtfeger, K.	69	Shuvalov, Yu. N.	126
Schweyher, K.	87	Shuvatov, L. P.	50
Schwier, V.	64	Shvartsman, I. Sh.	94
Schwier, W.	65	Sidorenko, A.	4
Sdobnov, S.	47	Sidorov, N. A.	11
Secchi, Gino	70	Siforov, V.	131
Sokerka, Ivan	96	Silayeva	6
Scletsky, Anatol	67	Silbiger, Stevan	24
Selivanov, A.	12	Simulescu, Dumitru	23
Semenov, E. I.	67, 92	Singgih, Prapodihardjo	41
Semiletov, S. A.	115	Sipiceanu, Mircea	23
Seredin, A. I.	15	Sivet, M.	99
Sergeyev, N.	94		

Sjogren, N.	100	Sykhov, V. I.	18
Skakun, G. F.	92	Szeliga, Zygmunt	21
Skamletz, T.	88	Szili, Geza	21
Slapnicka, Harry	24	Szopiinski, Zbigniew	80
Slavin, V. B.	94		
Smidt, Dieter	79	- T -	
Smirnov, P.	16		
Smiroda, J.	113	Tabata, Y.	121
Smolyannikova, A.	13	Tai, Li-hsin	68, 116
Smrcek, Karel	96	Tajiri, I.	123
Sneck, Tenho	69	Takagi, Atsushi	89
Sobolev, S. L.	107	Takahashi, A.	124, 125
Sokolova, N. V.	52	Takeo, Matsukawa	133
Sokolovskiy, V. D.	17	Takeuchi, T.	122
Solonevskaya, A. V.	56	Takha, Mokhamed Samekh	58
Solov'yev, N. A.	50	Tamura, N.	124
Solov'yev, S. I.	60	Tunaka, Tokuichi	48
Solov'yev, S. P.	75	Tanaka, Yoshida	120
Sorokin, G.	9	Tanasescu, Florin	15
Sotnikov, N. L.	10	Taniguchi, Ch.	106
Spaepen, G.	97	Tannhauser, Armin	129
Speith, K. G.	102	Tappe, W.	69
Spintsis, I. A.	126	Taranov, M. T.	56
Spirkin, V.	7	Tarasewich, V.	46
Stamboliev, St.	25	Tardy-Joubert, Philippe	117
Stanov, Lyuben	20	Tarmann, B.	101
Stange, K.	69	Tarora, Isao	105
Starzinskiy, V. M.	111	Tashiro, Shuichi	104
Stavskiy, M. S.	107	Tatevskiy, V. M.	82
Stefanenko, T. T.	96	Taubman, E.	113
Stefaniu, Gheorghe	134	Teranishi, K.	122
Steiner, W.	69, 100	Terent'yev, M.	48
Steinmetz, H.	69	Ternes, H.	88
Stenberg, Dag	31	Thiriet, L.	84
Stepanov, G. P.	81	Tiger, M. T.	84
Stepanov, V. M.	90	Tikhomirov, V.	3
Stieler, Alfred	103	Tikhomirov, V. G.	47
Stoian, Stanciu	134	Timoshevskiy, V. I.	83
Strobl, G.	128	Tindeche, S.	22
Strutsovskaya, E. S.	54	Tiron, M.	77
Stryrikovich, N. A.	82	Titov, V. K.	106
Studitskiy, A. N.	63	Tkachenko, N. N.	53
Subotwicz, Mieczyslaw	46	Toki, K.	106
Sudisman	41	Tokunaga, Shigeo	104
Sugimoto, T.	66	Tolnai, Gabor	133
Sugiyama, Yukio	70	Tomas, O.	7
Suglobov, D. N.	115	Topchiyev, A. V.	114
Sumi, T.	123	Toskic, Vlajko	48
Suslyak, V.	5	Tosovic, Svetozar	48
Suta, N.	23	Tovbin, I.	4
Suzuki, N.	122	Tran, Duc	37
Suzuki, H.	123	Tran, Dung Tien	38
Suzuki, Kunic	105	Tran, Quang	37
Suzumoto, T.	105	Traynard, P.	114
Svetikova, K. M.	53	Trenkler, H.	100

Trifonenkov, P.	16	Verrier, P.	114
Trikoye	39	Vieira, Gilberto	40
Tryta, M.	96	Vilim, O.	97
Tsarevskiy, B. V.	93	Vingot, R.	117
Tsimel'zon, I. O.	72	Vinner, G. C.	67
Tsou, I-jen	35	Vinogradov, N. A.	58
Ts'ui Tsung-pao	35	Viasov-Vlasuk, O. B.	81
Tsuji, Y.	121	Vleduts, G. B.	108
Tsvetkov, V. M.	68	Volkov, V. B.	92
Tsvetkova, E. M.	53	Volkovitskiy, G. I.	95
Taylev, L. M.	93	Volkovskiy, L. I.	107
Tayrlin, L.	13	vom Ende, H.	102
Tumanov, V. I.	94	von Becker, R.	128
Turci, Lanfranco	30	von Czetsch-Lindenwald, H.	133
Turkei'taub, N. N.	83	von Moos, R.	87
Tursunov, Z. T.	51	von Oppolzer, Theodor Kitter	76
Tuyama, Takasi	66	Voynov, S. B.	61
Tuyev, G. V.	68	Vrteli, G.	23
Tyrkov, E.	49	Vuorelainen, Y.	97
Tyshkevich, N. I.	108	Vyalov, G. N.	117
Tyukhtin, V. S.	130		

- U -

Udagawa, Takeshi	119
Uehara, Tokuzo	133
Uemura, T.	123
Uimer, M. C.	84
Umeda, S.	122
Urbach, F.	127
Urban, Rudolf	24
Urbany, D.	29
Uschwa, H.	127
Ushimaru, Shutaro	76
Usikov, M. P.	95
Ustiyev, Ye. K.	132
Usui, H.	105
Utevskiy, L. M.	95
Utkin, E.	13

- N -

Wallsten, Erik	80
Wampach, J.	99
Wang, Te-jung	93
Wartmann, R.	111
Wehner, G.	100
Weibracht, O.	128
Willems, G.	31
Willis, J. M.	45
Wipperman, F.	77
Wolf, D.	69
Wu, Yung-hsiang	35
Wusatowski, Z.	106

- Y -

Val'dshteyn, E. A.	52
Val't, L. O.	61
van Calker, J.	69
van der Linde, A.	118
Varyushin, V. Ya.	60
Vasenkov, V.	5
Vasil'yev, B. A.	6
Vdovenko, V. M.	115
Velichko, V. A.	82
Velikanova, T. Ya.	94
Velo, Aurelio	89
Venikov, V. A.	78
Vennin, J.	84

Yablokov-Khnzoryan, S. M.	63
Yadlin, Aharon	32
Yagovdik, N. K.	91
Yakobson, Ya. S.	50
Yakovlev, V. N.	61
Yakovleva, R. V.	81
Yalevko, F. I.	12
Yamaguchi, K.	105
Yamaki, N.	123
Yamamoto, Soki	41
Yamaoka, H.	121
Yamasaki, Naomasa	77
Yamashita, H.	120
Yamazaki, Toshimitsu	119

Yasnov, M. A.	1	Zuithoff, A. J.	101
Yasuo, Inamura	133	Zvorev, N. I.	75
Yelizarov, Z.	1	Zwolski, Włodzimierz	66
Yel'seyenkova, M.	10		
Yemel'yanov, V. S.	92		
Yen, Tsang Po	96		
Yeremenko, V. N.	94		
Yermolenko, N. N.	91		
Yesenov, Sh. Ye.	9		
Yevstukhin, A. I.	92		
Yezhevskiy, A.	12		
Yi, Chang	41		
Yi, Ilyok-su	41		
Yi, Jin-yong	36		
Yim Ke-ch'ol	39		
Yoshida, N.	122		
Yu, Hong	41		
Yudin, I. F.	81		
Yukie, Kikuchi	133		
Yunus, M.	117		
Yusupov, O. Yu,	60		

- 2 -

Zadumkin, S. N.	67
Zaolani	39
Zakharov, A. M.	90
Zaleski, Marcin	21
Zaluzhnyy, V.	3
Zamalin, V. S.	83
Zaretskiy, L. S.	68
Zayko, M.	73
Zayko, N. S.	53
Zaytsev, V.	5
Zontgraf, Johann Otto	88
Zhadin, V. I.	63
Zhestyanikov, V. D.	52
Zhil'yalov, L. N.	71
Zhongelovich, I. D.	72
Zhukhavitskiy, A. A.	83
Zhunini, L. A.	91
Zhuravlev, A. I.	54
Zhuravlev, A. V.	53
Zil'berman, Ya. I.	113
Zil'bortal, Ye. A.	53
Zimmermann, E.	102
Zinger, I.	8
Zinov'yev, A. A.	68
Zischkale, W.	87
Zmihorski, E.	101
Zołotarev, T. L.	1
Zonn, V.	73
Zotin, A. I.	61

* * *

UNCLASSIFIED
Central Intelligence Agency



Washington, DC 20501

7 September 2004

Ms. Roberta Schoen
Deputy Director for Operations
Defense Technical Information Center
7725 John J. Kingman Road
Suite 0944
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

A handwritten signature in black ink that appears to read "Sergio N. Alcivar".

Sergio N. Alcivar
Chief, CIA Declassification Center,
Declassification Review and Referral
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

UNCLASSIFIED

Processing of OGA-Held CIA Documents



The following CIA documents located at DTIC were reviewed
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fltr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0834364	78-03109A	52	1	6	62	Consolidated Translation Survey For February 1963	2/1/1963	232	Approved For Release	3/25/2004
AD0402915	78-03109A	52	1	7	63	Consolidated Translation Survey For March 1963	3/1/1963	314	Approved For Release	3/25/2004
AD0405169	78-03109A	52	1	8	64	Consolidated Translation Survey For April 1963	4/1/1963	278	Approved For Release	3/25/2004
AD0409473	78-03109A	52	1	9	65	Consolidated Translation Survey For May 1963	5/1/1963	358	Approved For Release	3/25/2004
AD0413153	78-03109A	53	1	1	66	Consolidated Translation Survey For June 1963	6/1/1963	361	Approved For Release	3/25/2004
AD0414818	78-03109A	53	1	2	67	Consolidated Translation Survey For July 1963	7/1/1963	249	Approved For Release	3/25/2004
AD0418328	78-03109A	53	1	3	68	Consolidated Translation Survey For August 1963	8/1/1963	324	Approved For Release	3/25/2004
AD0834365	78-03109A	53	1	4	69	Consolidated Translation Survey For September 1963	9/1/1963	193	Approved For Release	3/25/2004
AD0423936	78-03109A	53	1	5	70	Consolidated Translation Survey For October 1963	10/1/1963	232	Approved For Release	3/25/2004
AD0426736	78-03109A	53	1	6	71	Consolidated Translation Survey For November 1963	11/1/1963	298	Approved For Release	3/25/2004
AD0428566	78-03109A	53	1	7	72	Consolidated Translation Survey For December 1963	12/1/1963	298	Approved For Release	3/25/2004
AD0431011	78-03109A	53	1	8	73	Consolidated Translation Survey For January 1964	1/1/1964	273	Approved For Release	3/25/2004
AD0433215	78-03109A	53	1	9	74	Consolidated Translation Survey For February 1964	2/1/1964	200	Approved For Release	3/25/2004
AD0437984	78-03109A	54	1	1	75	Consolidated Translation Survey For March 1964	3/1/1964	305	Approved For Release	3/25/2004
AD0440831	78-03109A	54	1	2	76	Consolidated Translation Survey For April 1964	4/1/1964	155	Approved For Release	3/25/2004
AD0442174	78-03109A	54	1	3	77	Consolidated Translation Survey For May 1964	5/1/1964	249	Approved For Release	3/25/2004
AD0443106	78-03109A	54	1	4	78	Consolidated Translation Survey For June 1964	6/1/1964	191	Approved For Release	3/25/2004
AD0444756	78-03109A	54	1	5	79	Consolidated Translation Survey For July 1964	7/1/1964	169	Approved For Release	3/25/2004
AD0447557	78-03109A	54	1	6	80	Consolidated Translation Survey For August 1964	8/1/1964	153	Approved For Release	3/25/2004
AD0450482	78-03109A	54	1	7	81	Consolidated Translation Survey For September 1964	9/1/1964	141	Approved For Release	3/25/2004
AD0451428	78-03109A	54	1	8	82	Consolidated Translation Survey For October 1964	10/1/1964	149	Approved For Release	3/25/2004
AD0453181	78-03109A	54	1	9	83	Consolidated Translation Survey For November 1964	11/1/1964	157	Approved For Release	3/25/2004
AD0455133	78-03109A	54	1	10	84	Consolidated Translation Survey For December 1964	12/1/1964	121	Approved For Release	3/25/2004
AD0456859	78-03109A	54	1	11	85	Consolidated Translation Survey For January 1965	1/1/1965	179	Approved For Release	3/25/2004
AD0458780	78-03109A	54	1	12	86	Consolidated Translation Survey For February 1965	2/1/1965	161	Approved For Release	3/25/2004
AD0461501	78-03109A	55	1	1	87	Consolidated Translation Survey For March 1965	3/1/1965	301	Approved For Release	3/25/2004